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ABSTRACT

This volume on apprenticeships in Australia summarizes 11 research studies. After an "Introduction" (Nigel Smart), the reports are: "Apprenticeship in Australia: A Concise History" (John Ray); "Issues and Directions from the Australian Apprenticeship and Traineeship Literature" (Stephen Saunders); "Determinants of Apprentice Training by Small and Medium-Sized Enterprises" (Katrina Ball, Brett Freeland); "Locational Issues in New Apprenticeships" (Tom Dumbrell, Wendy Finnegan, and Rowena de Montfort); "Unlocking the Barriers: A Regional Perspective of Apprenticeships and Traineeships" (John Martino and Sue Holden); "Apprentices' and Trainees' English Language and Literacy Skills in Workplace Learning and Performance: Employer and Employee Opinion" (Shirley O'Neill and Annabelle Gish); "The Value of On-the-Job Traineeships" (Josie Misko, Jan Patterson, and Rosemary Markotic); "Training for Skilled Trades in Australia, 1980-2000: Training Reforms" (Elizabeth Webster, Michael Dockery, Thea Bainger, and Ross Kelly); "On- and Off-Job Approaches to Learning and Assessment in Apprenticeships and Traineeships" (Andrew Strickland, Michele Simons, Roger Harris, Ian Robertson, and Maddy Harford); "Factors That Contribute to Retention and

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Completion in Apprenticeships and Traineeships" (Roger Harris, Michele Simons, Heather Symoms, and Berwyn Clayton); and "Quality in Context: Reflections on Factors Impacting on the Quality of Apprenticeship and Traineeship Training" (Kaye Schofield). (YLB)

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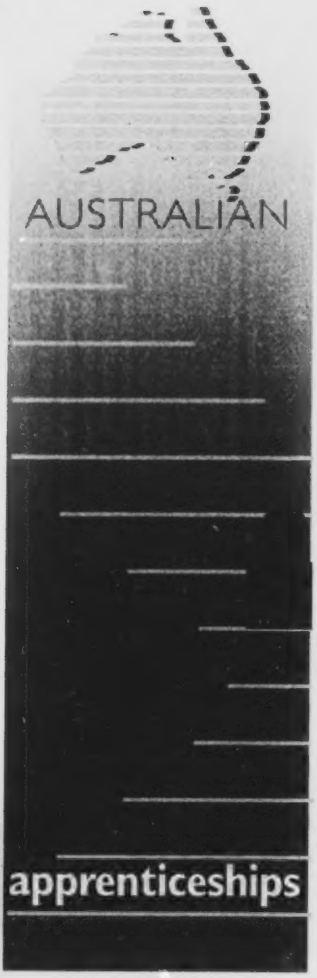
NCVER Australian Apprenticeships

Research readings



edited by

Nigel Smart

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Contributors

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Berwyn Clayton is the director of the Centre Undertaking Research in Vocational Education at the Canberra Institute of Technology. Berwyn has been working in Technical and Further Education (TAFE) since 1983 and has been actively involved in research since the early 1990s. Her particular research interests are competency-based assessment, professional development of teachers and trainers, and entry, selection and completion of vocational education delivered in institutional settings.

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Brett Freeland worked as a researcher with NCVER, where he undertook research into the social and economic effects of apprentice and trainee policies and practices. With the South Australian Department for Education, Employment and Training he worked directly with apprentices, trainees and training providers. He currently holds a position with the Department of Industry, Science and Resources.

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Roger Harris is associate professor in adult and vocational education and director of the Centre for Research in Education, Equity and Work (CREEW) within the University of South Australia. His recent research includes a range of nationally funded projects on workplace trainers, VET staff development, VET professionals' work, apprenticeships and traineeships, work placements, police workplace learning and notions of continuous improvement in the automotive industry. He is an executive member of the Australian VET Research Association.

Sue Holden has been involved in the TAFE division in teaching, co-ordinating and research roles. Her current position as a project officer is with the Centre for Curriculum, Innovation and Development (CCID) at Victoria University. She is working on a number of industry projects, including research into TAFE as a learning organisation and has collaborated with the School of Education, Victoria University on an NCVER research project looking at apprenticeships in Melbourne's western region.

Ross Kelly currently holds the position of research fellow at the Centre for Labour Market Research, Murdoch University, Western Australia. His research interests include intra-urban differences in youth employment outcomes and the role of neighbourhoods and families, structural change and the composition of employment, mature-age labour markets, technological change and the demand for skills and evaluation of the employment services market. He is also involved in research into the distribution of costs and benefits for trainees and apprentices, funded by NCVER.

Rosemary Markotic is currently general manager with the Office of the Director of Public Prosecutions, Attorney-General's Department. Previously, Rosemary held the position of principal policy officer of the Vocational Education and Training Quality Branch, Department of Education, Training and Employment. In this role she was responsible for the development, implementation and evaluation of the South Australian registration requirements for training organisations seeking to deliver nationally recognised qualifications under the Australian Recognition Framework.

John Martino holds the position of lecturer at the School of Education, Victoria University. He has taught in secondary schools in the western suburbs of Melbourne and has lectured and conducted research in a number of Australian universities. Recently, in collaboration with colleagues in the TAFE sector, John has completed an NCVER-funded research project on the problems faced by young people in taking up apprenticeships in the western region of Melbourne.

Josie Misko is a senior research fellow at NCVER and is particularly interested in workplace training, especially as it applies to apprentices and trainees. She has written and researched in a variety of areas dealing with issues connected with training reform. These include competency-based training and assessment, the outcomes of flexible delivery programs, transfer of knowledge, learning styles, outcomes of VET in schools programs, workplace training and assessment and transition to work pathways.

Shirley O'Neill is a senior research fellow at the Centre for Applied Linguistics and Languages, Griffith University. She has extensive research, teaching and development experience in the area of English language and literacy, language assessment and workplace language competencies for industry needs and teaching. Other industry research includes development of Languages Other than English (LOTE) competencies for tourism and hospitality and associated language assessment model and language competency framework for vocational education.

Jan Patterson is currently a principal policy officer with the Department of Education, Training and Employment working on a national project supporting youth development activities across Australia. Previously, Jan managed the State Government apprenticeship and traineeship field services and took a lead role in the development of policies and procedures for the implementation of New Apprenticeships in South Australia. She has also undertaken research and strategic planning for several industry training advisory boards and has considerable experience in research, evaluation and consultative processes.

John Ray is the principal of John Ray & Associates Pty Ltd, a Canberra-based consultancy that specialises in labour market analysis, and education, training and industry policy. Since 1992, he has completed more than 40 projects for a range of clients, including Commonwealth and State departments and agencies, industry associations and industry training advisory bodies. John has extensive experience of the development of apprenticeship (and traineeship) policy in Australia over the last 20 years.

Ian Robertson is the manager, Educational Product Services at Box Hill Institute of TAFE. He has 18 years experience in VET working as a teacher, curriculum developer and manager. Ian's major area of research interest is training policy, its impact on teachers' practice and program delivery.

Stephen Saunders is a part-time senior research fellow with NCVER. He formerly held senior positions in the corporate, VET, and labour market areas of the Department of Employment, Education and Training. Stephen was a member of the Department of Employment, Education, Training and Youth Affairs New Apprenticeships Taskforce in 1996–97. He also occupied senior VET positions concerned with training accreditation for the SkillShare program, the development of the inaugural ACT Vocational Training Authority and the first implementation of traineeships.

Kaye Schofield is one of Australia's leading independent commentators and researchers in the field of VET. Since 1994 she has led and managed highly influential assignments at national and State levels and also internationally. During 1999 and 2000 she reviewed the quality of the apprenticeship and traineeship systems in Queensland, Tasmania and in Victoria. Kaye is also adjunct professor in the Faculty of Education at the University of Technology Sydney (UTS) and executive director of the Research Centre for Vocational Education and Training at UTS.

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Nigel Smart was general manager of Strategic Planning and Research for VET in Victoria until 1999 when he left the then Office of Training and Further Education to start his own business, Smart Consulting and Research. His most recent work has included co-ordinating the research being reported in this volume. Recent research relating to apprenticeships and traineeships has included an investigation of employers' views on the changing quality of applicants for apprenticeships and traineeships and the identification of improvement strategies.

Andrew Strickland is adjunct professor at the Centre for Research in Education, Equity and Work and the Hawke Institute, University of South Australia. He was formerly the executive director, Standards and Curriculum Council and general manager, Australian National Training Authority. Previously, Andrew was chief executive officer (CEO) of the Department of Employment, Training and Further Education, CEO of the Department of Labour, and Commissioner for Public Employment, South Australia.

Heather Symons is a senior researcher in the Centre Undertaking Research in Vocational Education at the Canberra Institute of Technology. Heather has been working in TAFE since 1989 and has been involved in VET research since 1996. Her research interests include retention and attrition, articulation, client feedback and performance monitoring as a mechanism for influencing practice and policy, and knowledge management.

Elizabeth Webster is senior research fellow at the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne. She has undertaken several studies either directly on apprentice training, or on industrial labour markets from health and hospitality to engineering and electrical work. Her recent work is concerned with the analysis of people's career paths.

Introduction

Nigel Smart

Background

IT DOES NOT seem so long ago that apprenticeships and traineeships were in the doldrums. The number of apprenticeships, after growing during the 1980s, declined during the 1991 recession and only increased again after 1995. There was debate as to whether apprenticeships were relevant in the rapidly changing global economy. Traineeships, after being introduced in 1985 as part of the Kirby reforms, had not been recognised as a viable form of workplace-based training.

That situation has changed dramatically over the last five years. Apprenticeships have been confirmed as a key element of governments' training policies and overall numbers have grown quickly, with numbers in some industries reaching historically high levels. The philosophy behind vocational education and training (VET) delivery has changed radically with the development of the training market and the introduction of 'user choice'. Additional funds were injected into the system by the Commonwealth Government and some State and Territory Governments, and the policy of partnerships involving workplaces and industry in VET has been strongly pursued.

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But with all this change and progress, there were some concerns about the development of apprenticeships and whether quality training was being delivered. Research was needed to answer a range of evaluation, policy and knowledge questions, which included questions like:

- what is actually happening in apprenticeships and traineeships?
- are traineeships actually delivering training or are they a form of subsidised employment?
- is the quality of training being improved?
- what is happening to completion? is it important?
- do all the parties understand the direction in which apprenticeships and traineeships are developing?

It was with these and other questions in mind that the National Research and Evaluation Committee (NREC) made apprenticeships and traineeships a key priority for research funding in 1999–2000. As part of a public tender process, organisations and individuals were asked to submit research proposals on the key questions outlined above for consideration, and from these proposals a number of research projects were chosen. In addition, the National Centre for Vocational Education Research (NCVER) contracted a number of specific research projects to complement those from the tender round and provide a more complete view of the situation regarding apprenticeships and traineeships.

This volume brings together all of this research in a form which should be useful to all stakeholders, including policy-makers, providers, employers, and teachers and trainers. It has been produced to assist in converting the research into practical propositions for improvement and development.

In all, 11 research studies are summarised in this volume, and they have been grouped under the following headings:

- Setting the scene
- Factors influencing apprenticeship and traineeship take-up and success
- Evaluation of the training received by apprentices and trainees
- Quality in apprenticeship and traineeship training

This chapter introduces the studies and draws out some of the findings that are of particular interest or in which common themes emerge. The subsequent chapters provide a fuller account of the research, and detailed reports of the research are to be published separately on the NCVER website.

Setting the scene

Two chapters have been written which set the scene for the research:

- 'Apprenticeship in Australia: A concise history' by John Ray
- 'Issues and directions from the Australian apprenticeship and traineeship literature' by Stephen Saunders

John Ray's chapter provides a valuable outline of the development of apprenticeships and traineeships in Australia. It describes a period of gradual improvement and development until the 1970s, punctuated by occasional, more rapid periods of change. The period from the mid-1960s to the mid-1980s saw significant increases in the number of apprentices as new policies and programs were developed and the arrival of skilled immigrants declined.

The chapter makes the point that immediately after the Second World War, training was fast tracked by the Commonwealth Reconstruction and Training Scheme which saw many ex-servicemen being trained as tradespeople in a much shorter time than the then statutory period of five years and without the

need for long periods of on-the-job training. The apprenticeship system re-asserted itself shortly after this period and once again became the predominant form of trade training, and the opportunity for the development of an alternative form of training was not developed. The chapter by Elizabeth Webster and her team, which is discussed later, suggests that there has more recently been a *de facto* move in this direction, again with an increasing number of workers in many trades never having commenced an apprenticeship.

From the mid-1970s a number of reviews and studies of apprenticeships and the training system led to increased funding for training, greater Commonwealth involvement and changes in the underlying philosophy of VET. The Kirby Review in 1985 recognised that the training needs of enterprises and the community were changing with the proposed introduction of shorter contracts of training in the form of traineeships. While slow to get off the ground initially, the number of traineeships have surged since the mid-1990s as new areas for training were opened up and growth continues to be strong.

The number of apprentices continued to grow rapidly until 1991, when the recession hit apprenticeship training very hard. Numbers dropped sharply and only recovered from 1995 onwards. Many reforms have been made since that time, most notably New Apprenticeships, and these reforms have been undertaken in the context of much wider reforms to the whole training agenda. In recent years, the number of apprentices has again reached historically high levels.

Ray concludes that the 1990s saw radical changes in the nature of work and that apprenticeships and traineeships will need to continue to change and evolve if they are to remain relevant.

Stephen Saunders in his review of the literature has undertaken the daunting task of developing issues, themes and directions from the great body of literature on apprenticeships and traineeships produced since 1985. This is not the place to further summarise his work, but he has structured his analysis and the development of the associated themes around the following issues and directions:

- issues:
  - supply and demand
  - training policy and system
  - public training market
  - private training investment
  - measuring training market outputs
  - training intermediaries, pathways and innovations
  - training quality and performance

- directions:
  - sharpening training investigation and diagnosis
  - repositioning the trades in the training marketplace
  - renewing the traineeship consensus
  - broadening the horizons for new pathways to vocational skills
  - testing new approaches to training markets
  - widening the avenues for structured training in enterprises
  - using intermediaries to develop new learning pathways
  - reinforcing priorities for training measurement and quality

Saunders has done all who have an interest in apprenticeships and traineeships a great service in summarising the extensive literature.

These two chapters provide an excellent introduction to current issues and developments on apprenticeships and traineeships. It will provide valuable reading for both newcomers to the topic and to those already working in policy and strategy development and implementation.

Factors influencing apprenticeship and traineeship take-up and success

Four projects were undertaken to investigate factors influencing apprenticeship and traineeship take-up and success. They are:

- 'Determinants of apprentice training by small and medium-sized enterprises' by Katrina Ball and Brett Freeland
- 'Locational issues in New Apprenticeships' by Tom Dumbrell, Wendy Finnegan and Rowena de Monfort
- 'Unlocking the barriers: A regional perspective of apprenticeships and traineeships' by John Martino and Sue Holden
- 'Apprentices' and trainees' English language and literacy skills in workplace learning and performance: Employer and employee opinion' by Shirley O'Neill and Annabelle Gish

Katrina Ball and Brett Freeland seek to identify the key determinants of apprentice and trainee employment in Australian small and medium-sized enterprises (SMEs). Their study is focussed on SMEs because of the major contribution they make to total employment in Australia.

Their investigation is based on data collected in the Business Longitudinal Survey by the Australian Bureau of Statistics (ABS) over the period 1994–95 to 1997–98. As this survey did not discriminate between apprenticeships and traineeships, the results refer to both forms of training.

Their analysis identifies both training-related and non-training-related characteristics of enterprises which may influence them to take on apprentices and/or trainees. Non-training characteristics include matters such as industry group, employer qualifications, form of the enterprise, union coverage, and size. Training characteristics include participation of existing staff in training, the type of training provided and the training provider used by the enterprise.

The study concludes that there is no evidence of a single business characteristic acting as a trigger for small and medium-sized enterprises to provide apprentice and trainee training, although there are a number of characteristics which affect an enterprise's propensity to undertake apprentice and trainee training. They include:

- size—larger firms with a high proportion of full-time staff are more likely to employ apprentices and trainees
- expansion--firms expanding on existing sites are more likely to employ apprentices and trainees

The most important result of their analysis is the support provided to the concept of a training culture. Their analysis provides evidence of the significant effect of training culture on employers' propensity to provide entry-level training.

Tom Dumbrell, Wendy Finnegan and Rowena de Montfort investigate factors influencing apprenticeship and traineeship take-up from the perspective of the local supply and demand for labour. This study analyses NCVER data on the commencements of apprentices and trainees over the period 1995–96 to 1998–99 by location and compares this with both age 15–24 unemployment and with total unemployment from ABS sources at those same locations.

Dumbrell, Finnegan and de Montfort find that there is no consistent pattern in apprenticeship and traineeship creation on a broad geographical basis, with the ratio of apprenticeship and traineeship commencements to total jobs varying from 1: 29 to 1: 78 in the major metropolitan areas of Australia and from 1: 18 to 1: 50 in non-metropolitan areas. When comparing the ratio of apprenticeship and traineeship commencements to the 15–24-year-old population with the unemployment rate at the same location, they find that there appears to be a correlation between low commencement rates and low unemployment—that is, the lower the unemployment rate the fewer apprentice and trainee commencements.

They then investigated the ratio of apprentice and trainee commencements to total employment within the major metropolitan areas and found widely disparate results, clearly showing that it cannot be concluded that the availability of jobs means that apprenticeship and traineeship openings will also be available. There is a need to look for other factors driving commencement numbers. They also find that across Australia there is generally a geographical mismatch between the location of jobs and the residential location of the young

unemployed. It is tempting to conclude that these variations reflect the differing policy approaches being adopted by States and Territories.

Dumbrell, Finnegan and de Montfort suggest that the reason for low participation rates in many areas may be owing to the fact that high growth, high-income enterprises in the knowledge economy are using apprenticeships or traineeships. If so, this phenomenon deserves further investigation.

John Martino and Sue Holden also examine locational issues but focus on one specific area—the western region of Melbourne. The focus of this research is on identifying the barriers to the uptake of apprenticeships and traineeships in this region, especially amongst young people. The findings of the research are based on information obtained from interviews, focus groups and surveys undertaken specifically for the project. The information was obtained from a range of interested parties, including students, teachers, employers, training organisations, organisations co-ordinating the employment of apprentices and trainees and advisers to government agencies.

The key barriers identified by the researchers included:

- school cultures focussed on academic attainment and which view apprenticeships and traineeships as a 'fall back' option
- lack of effective advice to students from schools on career options
- lack of growth in demand amongst employers arising from concerns about potential economic growth
- lack of understanding amongst many employers about apprenticeships and especially New Apprenticeships
- structural and co-ordination issues concerning New Apprenticeships
- the western region of Melbourne being depressed in regard to youth employment outcomes and most apprenticeships tending to be in 'old economy' industries

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Shirley O'Neill and Annabelle Gish look at the impact of English language and literacy (ELL) skills of apprentices and trainees on their learning and performance in the workplace once they have commenced. Their research is based on information obtained from surveys of apprentices and trainees and their employers in Queensland and case study interviews in Queensland, New South Wales and Victoria.

This research provides a detailed investigation of the ELL skills of apprentices and trainees and their adequacy, as assessed by both the apprentices and trainees themselves and their employers.

The results of the research show that employers place great emphasis on apprentices and trainees having adequate ELL skills in conjunction with a range of other organisational skills, knowledge of business operations as well as attitudinal qualities they perceive as influencing workplace performance.

Apprentices' and trainees' ELL skills are viewed as having a profound influence on workplace performance as well as learning.

On the surface, the opinion of apprentices and trainees about their own ELL skills was extremely positive compared with that of employers. However, both employers and employees overall identified a need for improvement in the areas of interpreting graphical information, writing legibly, spelling and punctuation and using computers. Both apprentices and trainees acknowledged a need to improve their ELL skills and recognised that these skills were important for their work and continued learning.

In keeping with the trends found in other studies on the importance of generic skills, employers were of the opinion that ELL skill demands were increasing in importance and broadening to incorporate information and technology demands.

Apprentices' and trainees' readiness to accommodate the ELL demands of the workplace also emerged as an important factor, and the extent to which school ELL skills provide a foundation for the demands of the workplace in terms of performance and learning is not clear.

They also found that there is a need to review these skills in the light of the demands of technology and the concept of a knowledge-based economy in the 'new world of work'. Impinging on this issue is the fact that there is considerable variation in the ELL demands of different jobs and different industry areas, yet there is no overarching framework to assist in conceptualising this view.

Besides ELL skill demands varying between jobs and industries, it was found that there may be a mismatch between the ELL skills required on the job and the ELL skills required to learn, particularly for jobs which have low-level literacy demands.

When apprentices and trainees are perceived as lacking adequate ELL skills, this has the potential to have very negative outcomes for all unless it is dealt with in a sensitive manner to avoid stigmatisation. Employers reinforced the view that when employees are unhappy about their ELL skills, they suffer from low self-esteem and lack confidence in doing their work.

These four research projects provide new insights and reinforce our existing knowledge of factors affecting the uptake of apprenticeships and traineeships. It is clear that the issue is complex and not subject to simple solutions. The rapid growth of employment in the 'new economy' at the expense of those industries that have traditionally employed apprentices, the salary benefit of university qualifications, the need for enterprises to be entrepreneurial, flexible and adaptable are amongst the many factors that are outside the direct influence of training policy. The challenge for apprenticeship and traineeship policy-makers is to identify how training can be adapted to this changing environment.

Evaluation of the training received by apprentices and trainees

Four projects were undertaken to evaluate the training received by apprentices and trainees. They are:

- 'The value of on-the-job traineeships' by Josie Misko, Jan Patterson and Rosemary Markotic
- 'Training for skilled trades in Australia, 1980–2000: Training reforms' by Elizabeth Webster, Michael Dockery, Thea Bainger and Ross Kelly
- 'On- and off-job approaches to learning and assessment in apprenticeships and traineeships' by Andrew Strickland, Michele Simons, Roger Harris, Ian Robertson and Maddy Harford
- 'Factors that contribute to retention and completion in apprenticeships and traineeships' by Roger Harris, Michele Simons, Heather Symons and Berwyn Clayton

The first of the studies in this area by Josie Misko, Jan Patterson and Rosemary Markotic investigates the value of on-the-job traineeships. Their chapter forms part of a larger national study that set out to investigate experience in on-the-job traineeships in office administration and small business. The research is based on information obtained from surveys of trainees, registered training organisations' mentors and employers in South Australia.

This research concludes that there are encouraging signs about the ability for on-the-job traineeships to provide relevant and appropriate skills training and experience and job opportunities for trainees.

Amongst the trainees and employers in both industries there was strong support for the value of the on-the-job traineeships in building both work and life skills and for developing increased job opportunities. Large numbers of both trainees and employers (approximately 70% of trainees and approximately 85% of employers) indicated that they would recommend the traineeship to others. The area identified as requiring most need for improvement was assistance during training. It is interesting to note that over half the employers allowed the training to be done during paid time, either during times when work was slow or by setting aside study periods. However, 30% of trainees had real difficulty in finding time to do their studies. Examination of the data suggests that there are potentially two groups of employers with quite different attitudes to the training. In conclusion, the research team identified three areas needing improvement. They are:

- adequate induction strategies for participants
- revisiting policies for consecutive contracts
- broadening the range of training experiences

The project undertaken by Elizabeth Webster and her team was the largest of the studies, being an amalgam of three originally separate studies:

- an examination of the extent to which training-linked career paths have developed in Australia
- job satisfaction in the trades—the relative attractiveness of working in the trades
- attrition from trades

One part of this study, relating to a work experience which was part of the investigation of training-linked career paths, could not be completed in time for this volume and will be reported on separately.

The research reported examines trends in occupational mismatch in the metals, building, vehicle and electrical trades and questions whether the process of award restructuring has created incentives for unqualified blue-collar workers to pursue careers in the trades. It uses data from existing sources together with surveys conducted specifically for the project.

This research has come up with some conclusions that are challenging to the apprenticeship system. These conclusions start by raising the question of whether formal apprenticeship training is needed in the trade areas investigated, claiming that many, if not a majority of, work skills are learned informally on the job.

The analysis finds that in 1996 about one in five trade-qualified workers were employed in lesser skilled occupations and about one in three working tradespeople did not possess trade qualifications. It finds that employers do not appear to value highly many existing trade skills and that workers with a one-year certificate earn, on average, almost as much as fully qualified tradespeople.

It also finds that training pathways for semi-skilled and unskilled adults appear to have become more prevalent since the introduction of award restructuring.

The research by Andrew Strickland and his team focussed on the evaluation of on- and off-the-job approaches to the learning and assessment of apprentices and trainees to identify examples of good practice. It reports, where possible, on apprenticeships and traineeships separately. The study draws on qualitative data from focus groups and case studies involving visits to sites and interviews with human resource managers, supervisors, group training scheme personnel and host employers. It also included a survey of 595 apprentices and trainees in the motor mechanic and hospitality industries.

Strickland et al. identify a range of factors that either support or inhibit successful approaches to learning and assessment. These factors are consistent with, in many cases, findings of other researchers reporting in this volume (for example, the importance of a training culture and the importance of meeting the literacy and numeracy needs of apprentices and trainees) but highlight others,

including providing pastoral care, appropriate funding arrangements and apprentice and trainee motivation and quality.

Overall, Strickland et al. find that apprentices and trainees report a high level of satisfaction with their learning and assessment processes which is consistent with other studies (for example, the NCVER graduate outcomes surveys), although apprentices and trainees did identify areas for improvement in workplaces, with the concern at the quality of the on-site trainers and the limited range of work provided at some sites being common. The study itself provides a comprehensive listing. It would seem from the study that apprentices and trainees perceive that although they are satisfied, there remains much that could be done by workplaces to improve their training. The employers no doubt also have their own views about that.

The researchers particularly note that in quite a high proportion of workplaces there are not people selected especially to help apprentices and trainees, which suggests that there is substantial scope still remaining to develop training cultures in workplaces.

They find that apprentices and trainees experience significant differences in treatment in their workplace environments. Trainees indicate that they have clearer formal assessment requirements, are given more feedback and encouragement about their performance and are provided with more opportunities to have their work assessed when they feel ready to talk to employers/trainers about what they would like to learn. Conversely, apprentices appear to have more opportunities while at work to attend classes and workshops that count towards their apprenticeship.

With regard to the off-site learning experiences of apprentices and trainees, the research results reinforce the importance of the contribution that these can make, especially in relation to:

- time to learn and practise skills not taught in the workplace
- time to talk about their job with others
- opportunities to have their competence formally tested

The data also enabled the researchers to compare two training models—a workplace-only model and an integrated model—and found a number of important differences. Interestingly, the aspects in the work environment of apprentices for which there are significant differences between the models are completely different from those of trainees reflecting their different perspectives. The researchers' conclusion regarding workplace-only contracts is one of concern. They find that a significant gap exists between what is perceived as needed in this model and the reality of the training raising issues about the quality of workplace-only training. In this, their findings appear to differ from those of Misko, Patterson and Markotic.

The researchers identify a range of conclusions and only two are identified here:

- there is a great diversity of approaches to learning and assessment practices
- achieving quality learning and assessment systems appears to depend on monitoring the balance of the competing tensions between the needs of the enterprise and the learning needs of the apprentice or trainee, and establishing effective partnerships between the apprentice/trainee, the employer and the training provider

The final study in this category, prepared by Roger Harris and his team, aims to identify and describe the factors that promote the process of retention, including those that are most amenable to change, and to examine possible interventions to enhance retention and increase completions of apprentices and trainees. The report complements that of Strickland et al. referred to earlier.

The project used quantitative data from the NCVER Apprentice and Trainee Statistical collection to develop a macro view of the issues relating to completion and retention. This was followed by 20 case studies covering a range of occupations in five States/Territories. In each State or Territory, two cases of high completions and two of high cancellation/withdrawal were selected. In all, 437 interviews were held.

Any analysis of retention and completion is fraught with difficulty because of definitional, interpretational and reporting issues. For example, many students who do not formally receive a qualification consider that they have successfully completed because their needs have been met. Also, recent studies have shown that many completions are not reported. In these circumstances, care must be exercised in using and interpreting the NCVER data.

The chapter identifies many factors that influence the process of retention and concludes that it is usually a combination of factors, rather than any single factor, that lead to withdrawal or termination. They also find that the combination is idiosyncratic, so it is not even possible to establish a profile of factors which, when occurring together, indicate high risk. The major factors identified during the qualitative part of the study which impact on retention were found to be:

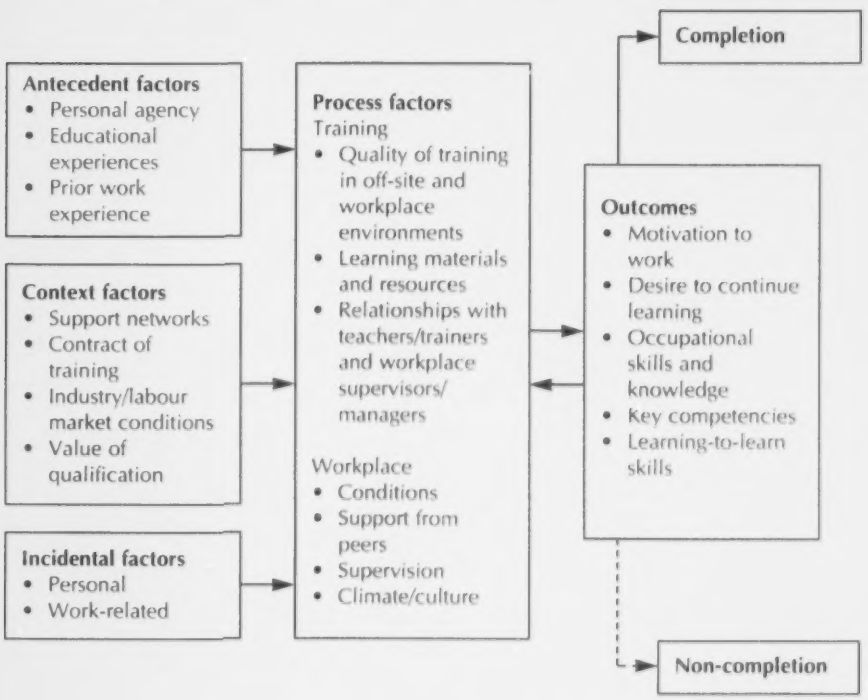
- a strong sense of personal agency on the part of the individual taking up the contract of training
- a support network (family, partner, friends) for the individual
- an initial placement that is suitable and offers conditions conducive to establishing the necessary support to deal with the demands of the contract of training
- previous satisfying work experience related to the occupational area
- supportive workplace supervisors/managers

- supportive workplace culture
- opportunities to participate in some form of structured training
- reliable transport
- availability of alternative career paths
- value placed on the qualification

Based on their research they have developed a model of the processes affecting retention and this is shown in figure 1 (see Harris et al. chapter in this report, p.233).

This is a complex interaction. Many of the elements are consistent with research reported elsewhere in this volume. The difficulty is in identifying the right mix and balance of interventions for those individuals at risk of not continuing and who view that outcome as not successful.

Figure 1: Factors contributing to retention and completion



Quality in apprenticeship and traineeship training

Kaye Schofield is in a unique position to discuss quality in apprenticeship and traineeship training, having undertaken reviews on this subject in three States—Queensland, Tasmania and most recently Victoria. In her chapter, 'Quality in context: Reflections on factors impacting on the quality of apprenticeship and traineeship training' she draws on her experience from these reviews to explore the more qualitative factors affecting apprenticeship and traineeship training, including workplace culture, personal values and beliefs and working relationships. She refers us to her reports of the reviews for her discussion on training processes and practices and the associated training system architecture.

With regard to apprentices and trainees, Schofield's findings include:

- on-the-job training needs to be structured and planned, the work needs to be relevant, varied and challenging and experienced workmates who can act as mentors and instructors are needed
- off-the-job training must be structured and rigorous, useful and relevant to them in performing their job and have strong links with the on-the-job training
- a quality induction to a firm is critical to a successful apprenticeship or traineeship

While there were differences in the reasons why apprentices and trainees undertook their training and the employment outcomes, their attitudes to what was required for effective training were very similar.

With regard to employers, Schofield's findings seem to point to the need for the employer to:

- take the training seriously
- understand how it needs to deliver effective training
- integrate training into its overall human resource strategy
- have a developed training culture
- see the training as an integral part of its competitive business strategy
- use training to achieve its business objectives

With regard to training providers, Schofield finds that—notwithstanding their operation in a new, volatile and less ordered environment—there appears to be a good deal of provider consensus on what constitutes quality apprenticeships and traineeships, although there are some important differences. The elements where there is consistency included:

- existence of a comprehensive training plan
- extension of experience beyond that provided on the job

- the need for dedicated time off task
- quality staff

The areas of difference included:

- the degree of group interaction necessary to ensure sound outcomes
- the approach to competency, whether specific or holistic
- the importance of workplace training
- their response to the new competitive environment

Schofield concludes with a finding that is supported by a number of the other research studies included in this volume. It is that good vocational learning depends not so much on technical matters as on two less tangible elements—relationships between the apprentice/trainee, the employer and the providers and the organisational cultures within both the workplace and the training provider—both of which are not especially amenable to public policy intervention.

Concluding comments

This introduction has been designed to draw out some of the common themes and the differences that have been found during this extensive research program funded by NREC. It is also designed to whet the reader's appetite so they will proceed on to those studies of particular interest to get the full story.

The issues raised by these studies are considerable as many of the key findings are not readily amenable to policy action by government. Developing strategies to achieve many of the identified ends through co-operation and persuasion is now the key challenge.

Apprenticeship in Australia: A concise history

John Ray

> *. . . the apprenticeship system has served Australia well and it should not be swept away unless something better is put in its place.* (OECD 1977, p.54)

THIS CHAPTER OUTLINES the history of apprenticeship in Australia from a national perspective. Most attention is given to the period after the Second World War, particularly over the last 25 years as apprenticeship has evolved to meet the demands of economic, technological and social change. The chapter has a policy focus and identifies key events and issues that have been important, and could still be important.[1]

Characteristics of apprenticeship

Throughout history, men and women have obtained knowledge and learnt skills in a variety of ways—through accident, observation, trial and error, formal and informal learning, and combinations of these. Apprenticeship has a long history as a way of learning while working, particularly for the craft or trades occupations. However, even for work in those occupations, it has never been the sole means of obtaining skills.

The term 'apprentice' is defined succinctly in the current Concise Oxford Dictionary as 'learner of a craft, bound to serve, and entitled to instruction from his employer for specific term, beginner, novice'. This definition illustrates that the term has both a specific meaning and a more generic one. The more specific meaning implies a contractual relationship between employer and employee, the more generic meaning implies a relationship but not necessarily a contract. Throughout this paper, apprenticeship is assumed to have the former meaning, which involves a formal contract of employment and training, and State regulation of such contracts.[2]

A fundamental feature of apprenticeship as a system of employment and training is that it is designed to directly benefit both the industrial parties—apprentices and employers.

- Apprentices benefit from having guaranteed paid employment for some years (nominally four years for most trade apprenticeships in Australia) and an opportunity to learn skills from qualified tradespeople.
- Employers benefit from having an employee who becomes more and more productive as time passes. The relatively high costs of employing first-year apprentices can be acceptable to employers on the basis that, by the third and fourth years, apprentices attain a work value about the same as a tradesperson but receive apprentice wages that are less than the qualified rate.

Striking the right balance between the benefits to employers and the benefits to apprentices has never been easy. Typically, differences arise because of the desire of employers to profit from employing apprentices and the desire of apprentices (endorsed by their parents) not to be exploited as cheap labour. Such differences have provided the basis for a large amount of industrial law relating to apprenticeship and for a high degree of State regulation. Legislation has enabled State supervision over the contracts of employment and training, including processes for resolving disputes between employers and apprentices.

Apprenticeship has also benefitted the community through its role in providing a supply of skilled people to provide quality goods and services. This community role of apprenticeship has provided another reason for governments to be involved in the apprenticeship system and to assist it financially. However, employers and unions (representing apprentices) have not always welcomed such government involvement. For example, in 1980 both parties refused calls from the Commonwealth to reduce the term of apprenticeship.

Origins of apprenticeship

Apprenticeship has a long history extending back to early Egyptian and Babylonian times. It became common in Medieval Europe, and from England it spread to the United States and the British colonies. The 1563 Elizabethan Statute of Artificers signalled the British Government's first attempt to define the conditions of apprenticeship as a way of providing sufficient skilled labour for craft and agricultural production. Under the statute, a person was not permitted to exercise a craft unless he had been apprenticed and there was a ratio system for the numbers of journeymen to apprentices that a tradesperson could employ (DEVET 1988, p.9). Similar provisions have been common in State and Territory legislation in Australia.

By the mid-1800s in England, apprenticeship was a common form of entry to skilled occupations, including many of the professions.

As the economies of the advanced countries moved through the industrial age and into the 20th century, vocational education institutions were established and/or companies decided to train their own staff. Accordingly, apprenticeship became less and less important as a means of training to the point where, in

most of the world, apprenticeship is no longer a major form of training. Its most concentrated application is in the Germanic-speaking countries where it is an integral part of the education system and covers a very wide range of occupations.

Next to the Germanic-speaking countries, apprenticeship is most common in Australia. The Australian brand of apprenticeship evolved from the English model. Although never on the scale of German practice, apprenticeship was an important form of training in England until recent years, particularly in the metal, electrical, building and vehicle trades. Gospel (1994, pp.511–513) considers that apprenticeship failed to evolve in the United States because of the dynamic nature of the US economy and its labour markets in the 19th and early 20th centuries.

The historical purpose of apprenticeship—to train artisans—has remained its main purpose in Australia. Apprenticeship has been the main way of training for both the traditional crafts (such as carpenter, plumber, hairdresser, and metal worker) and more contemporary trade occupations (such as vehicle mechanic and electrician).

Indeed, it should be noted that despite 160 years of change in the nature of work, the common occupations covered by apprenticeship in the construction industry in England in the mid-1800s are still major occupations covered by apprenticeship today (Whittock 1842). They include the trades of bricklayer, cabinet-maker, carpenter and joiner, glazier, painter, plasterer and plumber.

Over time, the Australian apprenticeship system has rarely produced a surplus of tradespeople. Indeed, the obverse has been the more common situation. This is in marked contrast to the German system where very large numbers are trained only to find that they cannot get a job in their occupational field.

One characteristic of Australian apprenticeship that appears to have changed in recent years is that the *training* role of apprenticeship has become more dominant than the *employment* role. This is reflected by the fact that, generally, State and Territory ministers for education now administer apprenticeship, whereas it used to be administered by ministers for industrial relations or industrial tribunals.

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Establishing apprenticeship in Australia

Apprenticeship came to Australia with the establishment of the colony of New South Wales in 1788. The colony adopted English law relating to masters and apprentices and this became the basis of subsequent laws throughout Australia. The relationship between master and apprentice was effectively a contract of employment and training. It was subject to the law mainly because it involved the employment of children.

Because of the relatively large number of migrants coming to the new colony, it could be assumed that most of the skill requirements of the period were met by the use of immigrant and convict labour. It is also reasonable to assume that as part of English culture at the time, apprenticeship was valued by employers and the community—it was an accepted way of providing young people with employment and training and ultimately giving them some status in the community.

It would further appear that having another way (apart from immigration) of providing craft skills was important for economic development. In other words, it was important for the community and the government to have a properly trained construction and manufacturing workforce which knew how to build and construct sufficiently well to ensure that buildings did not fall down or products fall apart.

By the end of the 19th century, apprenticeship was well recognised throughout all the States, which retained the responsibility for regulating and administering apprenticeship after Federation.

As indicated in Beattie (1968, p.105), the NSW Apprentices Act 1894 established the first Australian apprenticeship legislation that differed from British law. A few years later, this Act was consolidated into the NSW Apprentices Act 1901, which included a detailed framework for the regulation of apprentices, including many features that remain at the present time.

Beattie (1968) also notes that subsequently, under the NSW Industrial Disputes Act 1908:

> *Apprentices received their first mention in our industrial legislation, there being included amongst the powers of a board the power to fix the number or proportionate number of apprentices and improvers and the lowest prices and rates payable to them.* (p.106)

From that point on, apprenticeship continued to be an important industrial relations matter.

Other States followed with their own apprenticeship legislation. They also established the industrial relations machinery to regulate conditions for each trade and to settle disputes. Apprenticeships under federal awards (such as in the metal, electrical and boot trades) came under the jurisdiction of the Commonwealth Conciliation and Arbitration Act 1904.

A common provision in apprenticeship legislation was for the establishment of committees to advise on matters for particular trades.

These committees proved to be extremely important to the development of apprenticeship in Australia. Normally, they included representatives from the trade unions and employer associations who were genuinely interested in apprenticeship and often promoted its development. They played significant roles in moving apprenticeship training from being mainly 'on-the-job' training

to where it included a technical education component, provided by day release wherever possible. They were also concerned with the development and redevelopment of technical education courses for apprentices, in conciliating differences and disputes, and in generally ensuring employer and union support for apprenticeship.

In some cases, the committees' guardianship of the apprenticeship system engendered a conservative approach to change such that negotiations to reform aspects of apprenticeship suggested by others could become quite tedious and difficult. On balance, however, the work of these committees reflected industry support for apprenticeship and played a large part in gaining community acceptance for apprenticeship and embedding it into Australian culture.

Generally, government administration of apprenticeship in Australia was a responsibility of the ministerial portfolios of industrial relations, rather than education portfolios. This reflected the traditional importance placed on the contract of employment and training, which, until a few years ago, maintained the old English terminology 'indenture'.

Until at least 1950, wage determinations concerning apprenticeship in Australia reflected the fact that apprentices were mainly 'juniors' aged from 15 to 19 years. As shown in the following extracts from significant cases, the determinations also reflected the social and economic circumstances of the time.

> Commonwealth Conciliation and Arbitration Act—1921 Engineers Case
> *I propose to prescribe wages for apprentices such as will enable poor parents to give boys a place in these crafts, without tempting them to put the lads when they leave school into some 'dead-end' labouring occupation.*
> (Beattie 1968, p.295)

> NSW Industrial Commission—1948 Plumbers and Gasfitters Apprentices' Case
> *We think also that the rates fixed should be such that they reasonably be expected to encourage boys to enter upon apprenticeship and not discourage employers from accepting apprentices. They should be such as to dissuade parents from placing their boys in dead-end occupations.*[3] (Beattie 1968, p.291)

In the first half of the 20th century the Australian population doubled—from just under four million in 1901 to about eight million in 1950. As the century progressed, apprenticeship became a common form of training for the trades and was subjected to an increasing amount of State legislation and federal and State awards. Increasingly, apprentices were required to attend technical education on a 'day release' arrangement, or at night, or through a combination of both. Significantly, the period of apprenticeship was reduced from seven years to five years after the First World War. During the 1960s, it was reduced to four years.

Very little reliable statistical information is available for the period. However, it would be reasonable to assume that apprenticeship prior to the Second World

War would have been on a relatively smaller scale to what it became after the war.

Apprenticeship after the Second World War

As a system for supplying skilled trades workers, the apprenticeship system was strained during and after the Second World War. Because of the shortage of skilled tradespeople who were serving in the forces, industry resorted to the use of 'dilutees', including many women. 'Dilutees' was the term given to workers who had a limited range of skills well short of the broad skills of a 'qualified' tradesperson. After the war, the Tradesmen's Rights Regulation Act 1946 was passed to protect the rights of pre-war tradespeople who had survived the war against the 'dilutees' and unqualified migrants who were beginning to arrive in Australia from Europe. This Act gave rise to a long-standing tripartite system for assessing skills in the metal, electrical and boot trades.

During the post-war boom, the Commonwealth Reconstruction and Training Scheme (CRTS) was established to facilitate 'fast track' training for the many servicemen returning from the war. This scheme demonstrated that adults could be trained as tradespeople in much shorter time than the statutory period of five years.

The resilience of apprenticeship over this period is testimony to the individuals (particularly the many trade committee members referred to above) who kept it alive over the years. For example, the fact that women had demonstrated their capabilities was soon forgotten, as was the fact that the CRTS demonstrated that adults could gain trades skills quickly through intensive courses in technical colleges or industry skills centres without the need for long periods of on-the-job training.

Until the 1950s, the apprenticeship model had also been used for the training of some professional occupations, such as pharmacy, surveying and nursing. However, such training was totally separate to, and not covered by, the arrangements and legislation applying to trade apprentices, and was subsequently abandoned in favour of higher education courses. Nurse training retained the apprenticeship model until the early 1980s, when it also transferred to higher education following the 1978 Report of the Committee of Inquiry into Nurse Education and Training.[4]

Proposals for change 1950–1972

Between 1950 and 1970, Australia experienced steady economic development, a large increase in population from eight million to 13 million and very low rates of unemployment.

During the period, the Commonwealth Government intervened to improve all levels of education except technical education. Major inquiries were instigated, including the 1957 Murray Inquiry into university education, the

1961–65 Martin Inquiry into advanced education, including teacher education, and various inquiries into schooling. Commonwealth financial assistance followed these inquiries, and participation in all forms of education increased, particularly in higher education. For example, between 1950 and 1972, enrolments in higher education increased by 570%—from 30 630 to 209 005. Over the next 20 years to 1992, they would grow to 559 365 (DEET 1993, pp.8, 46; CTEC 1986, p.282).

In this environment, apprenticeship evolved slowly. It was largely taken for granted as a way of training for the trades and was supported by both unions and employers, and the negotiated apprenticeship provisions were included in industrial awards.

Eventually, the Commonwealth and the States became aware of the wider policy implications of the apprenticeship system and commissioned a number of inquiries. The Commonwealth recognised the importance to the national economy of having a reasonable supply of skilled tradespeople, particularly as immigration levels declined (immigration had played a major part in the development of post-war Australia).

However, despite the inquiries, little changed. Writing of the 1950s and 1960s, Kirby (1981) noted that:

> *Although a great deal was spoken and written about the inadequacies of the apprenticeship training system, practically no reform of the system was attempted or policy analysis of wages issues relating to labour market imbalances undertaken.* (p.8)

The evidence suggests that while the Commonwealth recognised some of the reforms that needed to be made, it lacked the commitment to actually bring about change.

There was also the problem that governments did not want to cause unnecessary industrial disputes. As far as apprenticeship was concerned, governments were third parties—if either party to apprenticeship (i.e. employers or unions representing employees) did not want to change apprenticeship conditions, it was always hard going to bring about change.

Despite the poor level of resources available to technical education, the period saw a steady introduction of new ways of delivering technical training to apprentices. For example, arrangements were made for apprentices to receive technical education in a range of new formats, including day release from employment, block release, and initial off-the-job courses both within apprenticeship and prior to apprenticeship (pre-apprenticeship courses). Differing opinions developed as to the value and appropriateness of pre-apprenticeship courses—Victoria strongly preferred training within apprenticeship with the apprentices paid wages while the other States were generally willing to trial new arrangements.

A complicating factor during the period was the significant debate about the relative values of general education and technical education. The main outcome from this debate was the discontinuation of technical education (and domestic science) in high schools in favour of general education.

The first significant national policy development concerning apprenticeship during the period was the decision at the 1950 Premiers' Conference to establish the Commonwealth–State Apprenticeship Inquiry, chaired by Mr Justice Wright.

The inquiry met from April 1952 to March 1953 and reported in March 1954. It involved public sittings and 138 submissions. The very long period taken to complete the Wright Report suggests a lack of urgency. However, it turned out to be a strong confirmation of the value of trade apprenticeships. A total of 90 recommendations were made to improve the apprenticeship system, including steps to achieve more uniformity between the States in the legal arrangements surrounding the indenture process. Two of the recommendations were considered to be both provocative and unacceptable to the States.

> *Apprentices should be regarded primarily as training or educational units and not industrial units.* (Wright 1954, p.32)[5]

> *A Commonwealth industrial tribunal should be established with power to fix an Australian standard of wages and conditions for apprentices which would be mandatory for State industrial authorities to adopt.* (Wright 1954, p.27)

One agreed outcome was to establish the Australian Apprenticeship Advisory Committee (AAAC), an advisory body comprising apprenticeship authorities that would meet annually to discuss matters of common interest. The AAAC did not meet until 1957[6] but remained for nearly 20 years until the Commonwealth/State Training Advisory Committee (COSTAC) replaced it. A senior officer from the Commonwealth labour department chaired both the AAAC and COSTAC.

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The interest in reform was again evident in a 1959 report *Training for industry* (AIDA 1959) by a high-level committee of the Australian Industrial Development Association. This report included over 100 recommendations, including many that were recommended repeatedly over the next 40 years and would sit well in most contemporary reports on the subject. The recommendations on apprenticeship (p.29) called for:

- more avenues to the trades other than apprenticeship
- apprenticeship terms to be less than five years
- intensive pre-apprenticeship courses in trade centres or technical colleges
- re-skilling of those whose skills are out of date
- apprenticeships for adults as well as young people aged 15 to 16
- the adoption of a scheme similar to the post-Second World War CRT Scheme

- apprenticeship to be assessed by competence and testing, rather than the passage of time

In 1962, the Department of Labour and National Service, which administered the Commonwealth's interest in apprenticeship, organised a high-level conference of officials and union and employer associations at Rowville, Victoria. The conference was to ensure (again) that 'sufficient skilled workers are available to meet the needs, present and prospective, of the Australian economy' (DLNS 1966, p.2). It was notable for three outcomes:

- It canvassed the notion of group apprenticeship, which had worked successfully in the United Kingdom.
- It recommended shorter periods of apprenticeship, which were put into effect later by consent variations to the Federal Metal Trades Award in 1962. According to Pead (1981, p.15): 'Prior to the 1962 amendments, the term of apprenticeship for almost all trades was five years'.
- The Commonwealth agreed to what appears to have been the first instance of Commonwealth financial support for apprenticeship. The Country Apprenticeship Scheme involved a subsidy to employers of £3 per week during the first year of an apprenticeship and living-away-from-home allowances for country apprentices.

As immigration began to slow down in the 1960s, Australia also commenced its move away from its special economic relationship with Britain, and further questions were raised as to the adequacy of apprenticeship as a source of skilled workers. For example, in a 1966 Working Party report (DLNS 1966), the then Secretary of the Commonwealth Department of Labour and National Service, Sir Henry Bland, noted that: 'Apprenticeship stems from an era pre-dating the Industrial Revolution, mass production methods and modern distribution techniques . . . Fundamentally, the conceptual basis of apprenticeship in Australia has remained unchanged' (p.3).

The 1966 report recorded the view that apprenticeship was not changing quickly enough but reflected the attitude of the time by backing off any real action to reform the system. For example, the main outcome was a recommendation to establish yet another high-level tripartite committee to consider increasing intakes of apprentices, shorter terms, UK-style levies and 'further research on why apprenticeship is not attractive to lads' (p.13).

Perhaps the most extensive review ever undertaken on apprenticeship was the three-year inquiry by the Industrial Commission of New South Wales, chaired by Mr Justice Beattie. His 638-page report in 1968 was a milestone in the history of apprenticeship (Beattie 1968). It addressed every aspect of apprenticeship and played a large part in determining future policy. The following few examples of issues and recommendations illustrate the foresight of the report.

- Criteria were developed for determining whether compulsory apprenticeship should be prescribed for a particular occupation. (pp.143–144)
- If the institution of apprenticeship is to remain an effective means of training an adequately skilled workforce, it will be necessary for the community to accept a bigger share of the costs of training apprentices than it now does. (p.495) [7]
- Broad training rather than job-specific training. (p.143)
- Periodic reviews of the lists of prescribed occupations to achieve consistency and remove obsolete occupations. (p.144)
- Uniform nomenclature and skill content in all States to assist mobility of labour. (p.144)
- Extension of the apprenticeship to commercial occupations. (p.144)

The 586-page report *The training of skilled workers in Europe* of 1969 (Tregillis 1969) was another major contribution. This report followed an investigation of the methods for training skilled workers in 17 European countries, particularly in relation to the engineering and electrical trades. The investigation involved six senior officials from the unions and industry associations visiting Europe from mid-October 1968 to early-March 1969. Brian Tregillis, then Deputy Secretary, Commonwealth Department of Labour and National Service, led the Mission Team.

Perhaps the most critical outcomes from the Tregillis Report concerning apprenticeship were the recommendations concerning the need to reduce the costs to employers of employing apprentices (consistent with the Beattie Report) and the possible value of a UK-style levy grant system. The report also provided much information on European training practices and led to a further opening-up of thinking about and beyond apprenticeship.

Subsequently, Australia's first National Conference on Training for Industry and Commerce was held at the Australian National University, Canberra during May 1971. That conference involved some 311 delegates (including seven government ministers) and broadened the debate on training beyond the trades (DLNS 1971, p.1). A departmental report to the Organization for Economic Co-operation and Development (OECD) noted that following the conference, the Minister for Labour established the tripartite National Steering Committee on Training for Industry and Commerce to continue the work initiated by the conference (DL 1974, p.149). Later, this committee was subsumed into a new National Training Council.

Overall, the impact of the Tregillis Report and the Canberra conference was to raise awareness of the need for industry to train. It also established a rationale for Commonwealth financial support for training and apprenticeship. Another outcome was the establishment in November 1973 of industry training councils in about 14 industry sectors. These councils were the forerunners to

what are now known as national industry training advisory bodies or ITABs (DL 1974, p.152).

In summary, perhaps the main points to come out of the period from 1950 to 1972 were that:

- inquiry after inquiry confirmed the benefits of apprenticeship but at the same time criticised its inflexibility
- at the grass roots, changes did occur—day attendance at Technical and Further Education (TAFE) and pre-apprenticeship were introduced
- most of the options for systemic change to apprenticeship that were found to be effective many years later were known in the 1950s and would sit comfortably in a contemporary report
- the inquiries into apprenticeship seemed to lack urgency and grass roots support to bring about change
- the lack of action demonstrated the difficulty of making fundamental reforms, particularly in convincing employer and union representatives on State advisory committees who became suspicious of the motives of 'outsiders' who wanted to change the system

Commonwealth intervention 1972–1984

This period between 1972 and 1984 saw a great deal of real action on the part of the Commonwealth and States to overcome many of the shortcomings with apprenticeship that had been difficult to address in earlier years. It also saw the beginning of significant Commonwealth funding for apprenticeship in Australia.

This financial support was driven largely by economic motives, such as the realisation after 1970 that immigration was declining and that a shortage of skilled workers would have an inflationary effect on the national economy. Table 1 shows the relative contributions of apprenticeship and immigration to the supply of tradespeople from 1963 to 1985 and how higher apprenticeship completions generally compensated for the decline in immigration.

The nature of possible financial support was influenced by the earlier views of commentators such as Beattie and Tregillis that employers needed assistance to offset the costs of training apprentices. A number of options were considered to encourage employers to have more apprentices, including direct financial assistance, tax concessions, levies, grants and marketing promotions.

The Commonwealth finally acted to provide financial support for apprenticeship in January 1973 when it introduced the National Apprenticeship Assistance Scheme (NAAS). This involved financial assistance to encourage employers to take on first-year apprentices, and living-away-from-home allowances for apprentices from country areas. By 1975–76, funding under NAAS had reached $34.9 million (Kirby 1981, p.13).

Table 1: Supply of tradespeople from apprenticeship and immigration

Year	Apprentice completions		Net settler gain		Total
	nos	%	nos	%	
1963–64	14 930	53	13 168	47	**28 098**
1966–67	17 071	59	12 034	41	**29 105**
1969–70	26 435	70	11 389	30	**37 824**
1972–73	22 862	79	6 240	21	**29 102**
1975–76	26 183	89	3 325	11	**29 508**
1978–79	30 632	89	3 967	11	**34 599**
1981–82	32 015	78	8 977	22	**40 992**
1984–85	36 534	95	1 921	5	**38 455**

Sources: Kirby (1981, p.15); DEIR (1986b, p.21)

Historically, NAAS was a landmark for apprenticeship in Australia. It marked the beginning of what was to prove to be continuous Commonwealth funding for apprenticeship and put apprenticeship firmly on the policy agendas of the Commonwealth Government and State Governments.

- Prior to NAAS, apprenticeship in Australia had worked effectively without government subsidies (apart from the costs of technical education costs and supervision of apprentices by the States). The costs and benefits of apprenticeship had always been taken into account in the various industrial determinations of apprentice wages.
- The State and Territory administration of apprenticeship had concentrated on servicing advisory committees and resolving disputes between employers and apprentices. Little attention had been given to overall apprenticeship policy.

The next major impact on apprenticeship resulted from the Report of the Australian Committee on Technical and Further Education (ACOTFE) in 1974 (Kangan 1974). This report was the final in a series concerned with improving education—earlier reports had addressed needs in universities, advanced education and schools. It recommended substantial Commonwealth funding to upgrade TAFE and played a critical role in improving facilities for trade training and apprenticeship, which by 1975 accounted for 20% of all enrolments in TAFE and 39% of total teaching effort (TAFEC 1976).

Importantly, the Kangan Report specified a philosophy for TAFE:

> *The emphasis . . . should be primarily on the needs of the individual for vocationally oriented education and the manpower needs of industry should be seen as the context of courses.* (Kangan 1974, p.xxiii)

The 1974 decision to provide Commonwealth assistance to TAFE was instrumental in changing the whole approach to technical education in Australia. Kangan compared the decision to support TAFE with 'Cinderella coming to the ball'. He was referring to the fact that TAFE was very much the

poor relation to universities and colleges of higher education. By 1974, the physical facilities available to TAFE were very poor—often they were worn out buildings that universities had vacated years earlier, and the equipment available for teaching apprentices was very old.

By 1977, concerns about the adequacy and quality of apprenticeship had grown. In response, the Commonwealth replaced NAAS with the Commonwealth Rebate for Apprentice Full-time Training (CRAFT) scheme, which was to prove to be a long-standing program. Essentially, CRAFT provided employers with rebates to offset the cost of wages lost when apprentices attended technical college or other approved off-the-job training. CRAFT also had other elements, including two consecutive $1000 bonus schemes to encourage employers to take on additional apprentices.

CRAFT had the objectives of improving both the quantity and quality of trade training. It was developed in the context that even in the late 1970s, small business played a large part in training apprentices. The Australian paper on apprenticeship, presented to the OECD in 1980, noted, for example, that 68% of apprentices were employed in firms with one or two apprentices and that such firms had accounted for 80% of the growth in apprentice numbers over the previous ten years (DEYA 1981, p.8).

The availability of CRAFT to employers ensured that apprentices did attend technical instruction at TAFE and enabled the further development of block release courses, particularly for country apprentices in Queensland.[8]

As CRAFT was a program to assist in maintaining a supply of trained tradespeople, it could not be used to assist occupations that were not trades. While some new occupations could be classified as trades and became eligible for CRAFT, other proposals for coverage were rejected. Two of these proposals concerned jockeys and real estate salespersons.

The trade focus of CRAFT was often criticised on equity grounds because males made up 90% of employment in trade occupations. The only significant trade occupation with significant numbers of females was hairdressing. In later years, females also became attracted to apprenticeships in cooking and gardening.

In 1979, the Report on Education Training and Employment (Williams 1979) recommended an increase in the amount of pre-employment education and training for the trades. It also recommended 'a determined effort to base training arrangements on the analysis of skills involved and the efficient ways of acquiring them, and not on custom' (p.337). This was a 'not so subtle' criticism of apprenticeship and the difficulty of reforming it.

Apprenticeship remained firmly in the spotlight in 1980 as concern mounted nationally about the capacity of the labour market to produce sufficient skilled people to construct very large resource projects. At the time, vast projects were planned for the North West Shelf in Western Australia (natural gas extraction)

and the Hunter Valley in New South Wales (aluminium smelters and power stations).

Acting on a request from the Premiers Conference in June 1980, the Departments of Labour Advisory Committee (DOLAC)[9] established a working party of Commonwealth and State officials. It was asked to report on ways of addressing skill shortages and 'assessing the need for change in the present trade training system, including possible new arrangements' (DOLAC 1980, p.1).

The short DOLAC Working Party Report commenced with the comment: 'The facts behind the commissioning of this report are simple, the issues complex' and made 27 recommendations to improve trade training in Australia. It received a large amount of positive publicity in the national media, and in September 1980, Commonwealth and State ministers for labour endorsed it as a blueprint for action. Subsequently, the following key outcomes from the 1980 report were tabled in another DOLAC report (DEYA 1982, Attachment, pp.5–8):

- an application in August 1981 by the Metal Trades Industry Association (MTIA) to vary the Federal Metal Industry Award in respect of provisions relating to the proportion of apprentices to tradesmen, the requirement to complete an apprenticeship by the 23rd birthday, and credit provisions for completion of pre-apprenticeship courses
- the commencement in 1981 of Commonwealth financial support for group apprenticeship, which hitherto had been only a marginal activity
- an increase in enrolments in pre-apprenticeship courses to 5416 in 1981
- Commonwealth funding for 'one off' Commonwealth–State schemes to train apprentices for major resource projects in New South Wales and Western Australia
- action to finally improve national statistics on apprenticeship

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The early 1980s were a period of much official activity to implement the recommendations of the DOLAC Report and develop and put in place measures to improve the flexibility of the trade training system. Through DOLAC and COSTAC, which had replaced the AAAC in 1978, detailed position papers and action plans were prepared on a range of issues including:

- new statistical frameworks for collecting data on apprenticeships from the States and Territories
- apprentice wage fixation
- financial assistance for group apprenticeship schemes
- the German apprenticeship system
- trade-based pre-employment courses
- the feasibility of institutional trade training

In 1982, bearing in mind the overseas trend towards institutional training and the success much earlier with the post-war CRT Scheme, DOLAC referred

the matter of institutional trade training to the Commonwealth/State Apprenticeship Committee (COSAC) for examination. The subsequent COSAC report (released in March 1984) was equivocal. It recognised the potential for such training but also the practical and industrial realities of taking it further at that time.

After the 1980 DOLAC Report, trade-based pre-employment and pre-vocational courses had been actively promoted by the Commonwealth and became reasonably popular—except in Victoria, where the major stakeholders were wedded to the traditional apprenticeship model.

A major analytical product of the period was a practical and comprehensible planning model that was developed by the Department of Employment and Industrial Relations (DEIR) to estimate the level of annual apprentice intakes required to maintain an adequate trades workforce. It was eventually published in a 1986 Report to DOLAC *Review of the labour market for the trades* (DEIR 1986b, pp.32–33). Two conclusions were that the main purpose of apprenticeship was to replace wastage in the trades and that an annual intake of about 45 000 apprentices was necessary to maintain an appropriate level of trade skills.

The traineeship period 1984–1990

By 1983, unemployment (particularly youth unemployment) had risen to unprecedented levels and was a major political issue for the newly elected Hawke Government. The 604 000 unemployed compared with only 78 000 at the beginning of the 1970s.

A 1983 report *Youth wages, employment and the labour force*, by the Bureau of Labour Market Research, had opened a lively debate in the media about the possible merits of reducing youth wages to improve the job opportunities of young people relative to adults.

At the same time, concerns were mounting in Commonwealth circles about the uncoordinated nature of the Commonwealth's labour market programs and the escalating costs associated with them. To examine these matters, the Government established a Committee of Inquiry under the chairmanship of Mr Peter Kirby. The committee reported in December 1984.

The centrepiece of the committee's report (Kirby 1985) was the recommendation to establish a system of traineeships that would be similar but different to apprenticeships.

To understand the importance of the recommendations on traineeships it is necessary to understand that the 1983 context was one in which:

- The apparent national school retention rate to Year 12 was 40.6%, compared with nearly 80% in 1999.
- There were 348 577 students in higher education compared with about 600 000 in 1999.

- The apprenticeship system was working reasonably well but was costing more and more in government support.
- The comprehensive occupational coverage of German apprenticeship was widely known among the training community and had been lauded (rightly or wrongly) as one of the reasons for what was then called the West German economic miracle.
- The Government's concern with the national budget resulted in the Kirby Committee being instructed to consider 'the need for continuous restraint in the growth of public expenditure and the desirability of maximising efficiency and cost effectiveness in the provision of labour market programs' (Kirby 1985, p.13). Effectively, this meant that the committee was asked to come up with 'cost neutral' solutions.

Another fundamental background factor was the knowledge that about 100 000 young people appeared to be going nowhere:

> *Of the 250 000 young Australians who reach the school leaving age each year, close to 100 000 immediately continue their education and complete 12 years of schooling. Many go from there to higher education, 35 000 to 40 000 gain an apprenticeship. Perhaps 10 000 to 15 000 enter full-time vocational courses in certain areas which have no Year 12 prerequisite. The remainder, over half of whom are females, seek to enter the labour force with no substantial vocational preparation. There may be as many as 100 000 young people in this category.* (Kirby 1985, p.61)

One option would have been to simply extend the coverage of the apprenticeship system beyond the trades. Under the circumstances in 1984, this would have been too expensive if it had involved the extension of CRAFT. The report noted:

> *. . . we do not favour the extension of CRAFT beyond the trades in which it currently operates. To do so would provide further support for what is, in effect, an inequitable and expensive practice of subsidising full-time training on full award wages. It would be inconsistent with our view that the costs of training need to be shared more equitably among employers, individuals and governments.* (p.134)

Another option would have been to reduce the need for CRAFT by somehow changing the fundamental way in which apprentice wage rates were determined, with a view to redistributing overall costs. For example, perhaps the trade training system could be moved more towards the German model of paying allowances rather than wages.

> *Current rates of pay for apprentices in Australia make it imperative for many employers that apprentices be productive. Lower rates of pay in West Germany allow the employer to place less emphasis on production, more on training, and consequently allow shorter training periods.* (Kirby 1985, p.126)

Because of the long industrial history of apprenticeship in Australia, this option was too impractical.

The proposal finally presented in the report was for 'a legitimate training system' (p.117) of traineeships that would 'act as a stepping stone into primary labour market jobs' (p.114).

The traineeships would combine learning and working in a similar way to apprenticeships but would apply to non-trades occupations and:

- initially attract 16- and 17-year olds who had not completed Year 12
- take about 12 months to complete, including about 65 days off-the-job formal training which could be undertaken either two days per week or as a 13-week block

The Kirby Report proposed that formal training should include general or transferable skills 'focussing on families of occupations' (p.115).

An innovative (and critical) feature of the traineeship proposal, which soon became lost, was the suggestion for income support. The report noted:

- *We do not wish to develop a system which relies on continuing government subsidies to recompense employers for releasing trainees to formal off-the-job training.*
- *A key principle of the new system is that trainees should be paid wages only for the time spent on the job.*
- *Employers should make a contribution to the training of the future workforce and ... an industrially determined wage will ensure that more attention is given to the nature of the work undertaken, when trainees are on-the-job.* (pp.116–117)

These principles were consistent with the directions given to the committee to develop 'cost neutral' proposals. Importantly, they were also consistent with the principle that students should be treated as students, and workers as workers. In other words, the proposal was a genuine attempt to break the nexus whereby the Commonwealth subsidised the payment of full award wages to apprentices while they were in full-time training—a practice that was not followed for other groups.

In effect, the Kirby proposals were a subtle indication that apprentice wages were on the high side and that it was counter-productive to be supporting them by government subsidies. However, to avoid likely industrial opposition to reducing apprentice wages, Kirby proposed a new system of structured training that would not rely on subsidies but had the potential to encompass apprenticeships in the future.

During the continuing debates about how to fix youth unemployment in 1985, however, people were looking for simple solutions, not subtle ones that would take time to achieve results. For example, in one of many media responses to the Kirby Report, the Australian Financial Review ran an editorial

on 25 January 1985, titled: 'Kirby, youth jobs and wages'. It criticised the lack of attention (in and out of the report) given to reducing youth wages as follows:

> *Youth unemployment is inextricably entwined to movements in youth wages relative to the wages of other groups. While youth unemployment may have been a 'sleeping' issue at the 1984 Federal elections, the chances are that it will be well and truly awakened by 1988.* (Financial Review 1985, p.12)

In such a political environment, the Government did not take long to endorse the traineeship proposals as a major response to youth unemployment. Furthermore, to hasten their introduction as part of a Priority One Youth Policy Package in 1985, the Government put aside its concern for 'cost neutrality' and agreed to subsidise traineeships in ways that were similar to apprenticeship subsidies.

For many years after 1985, the Commonwealth and the States put much energy into developing traineeships, initially under the Australian Traineeship System (ATS), with the Kirby estimate of 75 000 traineeships per year as the planning target. By 1987–88, the Department of Employment, Education and Training (DEET) had 177 operative staff engaged in traineeship activity throughout Australia involving an appropriation of $53 million. This compared with 78 staff and an appropriation of $131 million administering trade training and apprenticeship (DEET 1988, pp.35, 37).

Traineeships were promoted mainly as quality training options for jobs in the service industries. The most popular fields were retailing, hospitality and clerical areas. However, progress was slow, mainly because of the need to have new industrial arrangements and new legislation in the States. The 1987–88 Annual Report of DEET reflected the work involved in its summary of progress:

> *At the end of June 1988, some 18 285 young people had begun a traineeship since the inception of the ATS in August 1985, and of these, 57% were in the private sector. Some 200 industrial agreements or award variations had been negotiated across a wide variety of industries . . . involving 43 unions. At the end of June 1988, 91% of all trainees were aged 16–18 years and 73% had not successfully completed Year 12.* (DEET 1988, p.38)

A continual source of embarrassment to government officials was the shortfall of intakes relative to Kirby's target figure of 75 000 new traineeships each year, particularly as both the youth labour market and the full-time labour market deteriorated under the impact of industry restructuring. On reflection, however, the fact that intakes were above 10 000 annually from 1987–88 should have received more positive publicity in the light of what was happening to the youth labour market. For example, school retention to Year 12 was rising, higher education enrolments were rising and full-time employment opportunities were falling.

The effort required to develop the traineeship system meant that trade apprenticeship was virtually left alone for many years. Apprenticeship

completions averaged about 33 000 from 1980 to 1993, reaching a peak of 39 582 in 1992–93 (DEIR 1986a; NCVER 1995).

Training reform 1990–1998

Despite very large increases in the participation of young people in school and higher education during the late 1980s, the 1990s arrived with youth unemployment remaining a major problem. Industrial restructuring and new technology were also beginning to have a marked impact on the labour market.

Once again, more government reports were commissioned to come up with solutions.

By 1991, the advice of DEET was that it was time to move on from the ATS.

> *Traineeships are seen to be of lower status than apprenticeships and (related to this) tend to be occupations employing a high proportion of females. Traineeships are often seen as an alternative to Year 11–12 for the less able, as a transition from school to work program or as a labour market program for the disadvantaged. There have been significant 'drop outs' in some traineeships. In contrast, apprenticeships are seen as 'solid' vocational training and over 70 per cent of apprentices who start subsequently finish.* (DEET 1991, p.9)

Policy-makers decided to take a new approach that would be more 'holistic', though arguably more complicated. The new approach involved moving away from training based on timeserving and the acquisition of knowledge to one based on training for competency to undertake tasks to national standards set by industry. It included national vocational qualifications, training pathways, recognition of prior learning, vocational education in schools, and a whole new language to describe it all.

During this period, the term 'Technical and Further Education' (TAFE), which had been coined by Kangan in 1974, was relegated for all practical purposes in favour of the broader international term 'vocational education and training' (VET).

The newly established National Training Board (NTB) promoted the development of competency standards based on industry needs. (By the mid-1990s the NTB was abolished with the establishment of the Australian National Training Authority).

For the providers and users of vocational education in Australia, the concept of having vocational competence as the main objective of training courses had always had great appeal. In 1975, for example, the then new Technical and Further Education Commission (TAFEC) tried unsuccessfully to enlist support to have all TAFE vocational courses classified according to their 'vocational objectives' rather than by admission criteria and length of course. Again, in 1980, the Commonwealth and States Conference of Ministers of Labour agreed that trade training should be based on competence rather than time serving.

However, little progress was made until late in the 1980s when the whole issue of competency-based training began to receive the support of unions and industry as well as the Commonwealth Government and State Governments.

In mid-1991, a DEET position paper *A new structured entry-level training system for Australia* favoured the term 'trainee' for both trainees and apprentices on the grounds that one term was preferable and that traineeship was 'a more modern term' (DEET 1991, p.31).

About the same time, other commissioned reports endorsed the move towards competency-based training.

The Australian Vocational Certificate Training System

On 21 July 1992, Commonwealth and State ministers agreed to establish the Australian Vocational Certificate Training System (AVCTS). This included Competency-Based Training (CBT), Recognition of Prior Learning (RPL), the Australian Qualifications Framework (AQF) and the National Framework for the Recognition of Training (NFROT). The newly formed Australian National Training Authority (ANTA) was directed to take a key role in implementing the new system.

The AVCTS was designed to be a comprehensive system of training involving:

- industry participation in the development and provision of training
- quality training to national standards
- achievement and recognition of competencies, however achieved
- multiple pathways for achieving competencies
- many different training providers, such as secondary schools, TAFE, private trainers, employer training etc.
- a national framework of vocational qualifications
- provision for those with disadvantages of different kinds

In November 1994, the Ministerial Council on Employment, Education, Training and Youth Affairs (MCEETYA) agreed to support the translation of both apprenticeships and traineeships to AVCTS by December 1996.

The NETTFORCE traineeships

Because of their quantitative impact on the training system, the introduction of the National Employment and Training Taskforce (NETTFORCE) traineeships was another significant event in the history of apprenticeships and traineeships.

NETTFORCE traineeships resulted from a government white paper on measures to address unemployment (Keating 1994). Aiming for a target of 50 000 additional training places, the NETTFORCE arrangements included a

new national training wage, training in small business, and the establishment of industry-focussed committees and administrative support to direct the initiative.

During 1995, a massive 'crash through' Commonwealth-funded effort was made to increase the numbers of traineeships. It involved moving well beyond conventional approaches and strained the system as never before. It included:

- providing traineeships in new industries and occupations (e.g. sport, recreation, and a range of sub-trades work); in jobs that cut cross occupations (e.g. swimming pool installation, home decorating, farm-stay accommodation); and in jobs related to the trades
- accrediting training that was delivered and assessed on the job only, with no mandatory requirement to attend off-the-job training, such as at TAFE
- providing traineeships in small business, involving a mixing and matching process to provide training to suit the specific needs of individual businesses
- extending the provision of traineeships beyond basic vocational qualifications Australian Standards Framework I and II (where they had applied since 1985), to ASF III and above

Largely as a result of NETTFORCE and the later New Apprenticeship initiative, the number of trainee commencements increased from 15 437 in 1994–95 to 34 721 in 1995–96 and 48 662 in 1996–97 (unpublished NCVER data).

The intensive effort to establish traineeships highlighted the 'problems associated with achieving national goals through eight State and Territory training systems with different legislative and administrative arrangements' (Ray 1996, p.19). It also highlighted many non-systemic problems, such as:

- poor understanding of traineeships by employers
- differing local views on the real need for some proposed traineeships
- concerns about the quality of training, and quality assurance
- the place of 'on-the-job only' traineeships
- the balance between training in generic skills and job-specific skills
- the target occupations and industries for additional traineeships
- the potential for 'diluting' apprenticeship training
- lack of a training culture in some occupations and industries
- the excessive time taken to reach agreement on new traineeships

The fact that employers had a poor understanding of traineeships was not surprising. From the advent of 'training reform' in the early 1990s, the whole training environment had been constantly changing and becoming more and more complicated. By 1995–96, the training system had become almost incomprehensible to anyone outside the training community.

Concerns about the quality of training and quality assurance arose—often, they were related to the growth of 'on-the-job only' traineeships. Some State training officials claimed that they had struggled for years to promote traineeships as quality training programs that were similar but different to apprenticeships only to see that approach abandoned in favour of a thrust for numbers. Accordingly, there were debates about what training should or should not take place under the various State-regulated systems that covered apprenticeships and traineeships, and what should be regarded as labour market programs.

Until 1994, traineeships had applied only to occupational areas well removed from the apprenticeship trades. However, the NETTFORCE traineeships initiative changed that situation and in the process another very long-standing principle—the application of regulated training to trades assistant occupations (e.g. exhaust mechanics, brake mechanics, and tyre fixers). In the past, such trainees would have been referred to as 'dilutees' and would have been the cause for industrial litigation based on a long-standing legal requirement (that had remained essentially unchanged since Elizabethan times), such as the following:

> *An employer shall not employ a person who is under the age of 21 years in a declared trade unless the person is an apprentice or qualified tradesperson in that trade.* (NSW Industrial and Commercial Training Act 1989, Sec. 24)

Although such provisions remained in most State-training legislation, they were not necessarily applied in the administration of apprenticeships and traineeships after 1994.

The realistic administrative approach reflected the reality of the marketplace where specialised 'sub-trades' businesses became popular. For example, in the specialist motor vehicle industry trainees did not need training as fully fledged motor mechanics nor did they wish to pursue it.

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An important associated development in 1994 was the agreement of the Australian Council of Trade Unions (ACTU) to unpaid work placements (or vocational placements) for secondary school students and TAFE pre-employment students that involve the achievement of workplace competencies. The agreement covered up to 240 hours of unpaid work—a provision that was subsequently included in the training legislation of three States and the Australian Capital Territory.

Later, the Commonwealth Workplace Relations Act 1996 effectively transferred all responsibility for work placements to the States by defining vocational placements as placements under the laws of the States and Territories. This opened up the prospect of unpaid work placements that could exceed the previous 240-hour limit.

New Apprenticeships

Following the change of government in 1996, the incoming Howard Government made its mark on the overall development of apprenticeship in Australia by introducing 'New Apprenticeships', which combined apprenticeships and traineeships under the one umbrella title and further extended the occupational coverage of apprenticeship-type training.

The New Apprentice arrangements introduced new features, such as *training packages* and *user choice of registered training providers*. Training packages were combinations of the training agreement (in place of indentures), training plans, competencies to be attained and the method of assessment and assessment guidelines. 'User choice' was a principle that allowed employers and apprentices and trainees to choose the training provider they required. Previously, TAFE had played almost an exclusive role in such training.

The new arrangements covered school-based and part-time apprenticeships and traineeships and formal training that was wholly on the job, or off the job at TAFE or a private provider.

In a major change of policy, New Apprenticeships were made available to existing employees. Previously they had been available to new employees only.

Subsequently, in 1997–98 the practice of 'declaring' occupations in State and Territory regulations was discontinued in Australia, except in New South Wales. However, even in New South Wales, traineeships proceeded in the sub-trades with the consent of unions and employers and the use of special titles for the occupations.

At the time, the legislative approach used by the States and Territories for the administration of apprenticeships and traineeships depended largely on the age of the legislation (Ray 1998, p.15). However, distinctions between trades apprentices and non-trade trainees continued to be made—either through training legislation (such as by distinguishing between training in a trade and training in other than a trade) or administration (where the legislation permitted administration by regulation).

The New Apprenticeship initiative had continued the growth trend set earlier. Within a few years, it resulted in very large increases in the numbers of trainees in non-trades occupations. It also led to a substantial increase in the amount of training undertaken outside TAFE by the newly registered training providers and by industry itself, including wholly on-the-job training.

Conclusion

The traditional form of apprenticeship has a long history and been an integral part of Australian culture as a way of training for the trades, particularly in the metals, electrical and building trades[10] where shortages of skills can lead to wage-led inflation.

Involving a contract of employment and training based on well-established industrial principles and procedures that preceded government subsidies, apprenticeship has become highly dependent on financial support from the Commonwealth since 1973.

Although it has been slow to reform, it has generally worked well, particularly as a form of entry-level training. It has been less successful in meeting skills needs through economic cycles.

However, the world will keep on changing and so must apprenticeship. In this context, the impact of globalisation and information technology during the 1990s was probably without precedent in history.

It was a decade that saw radical changes in the nature of work and in the 'ways of doing things'. It resulted in many new types of work, more casual jobs, fewer 'jobs for life', higher job mobility, less job security, more contracting, and large-scale employment by labour hire companies. Many large companies and public sector organisations that used to train apprentices stopped doing so, and small businesses saw difficulty in making four-year commitments to train. For their part, young people had more job mobility than previously and often did not feel obliged to honour their employment and training contracts.

In such an environment, is it not surprising that apprenticeship has to change and evolve further from the traditional model if it is to remain relevant?

Whether the world keeps changing at the pace of the 1990s remains to be seen. The only certainty is uncertainty. The future should be interesting.

Notes

1 This chapter is a condensed version of a longer report *Apprenticeship in Australia—An historical snapshot*, which will be published electronically by NCVER and available on its web site.

2 Since 1933, New South Wales has provided for both indentured apprentices and trainee apprentices. Trainee apprentices, who make up about 16% of the total, do not enter into term indentures. Rather, they are free to move from one registered 'trainee employer' to another. The majority of trainee apprentices are in the building industry.

3 At that time, the award wages for 'improvers', to whom employers were not bound to teach a trade, were substantially higher than for apprentices in the earlier years.

4 In 1977, there were 26 525 nurses in basic training in Australia (Karmel 1978, p.132). Most were females and the annual intake of some 10 000 was significant even compared with the 1977 intake into trade apprenticeships (38 680), most of whom were males (DEIR 1986a, p.7).

5 It is interesting to note that in 1984, the Kirby Committee came to a similar conclusion that 'the emphasis on apprenticeship should be on its role as a training system rather than as a means of employing young people' (Kirby 1985, p.127).

6 It might be noted that seven years elapsed from when the premiers agreed to establish the Wright Inquiry and when any of its recommendations (such as to establish the AAAC) was taken up. Furthermore, while the AAAC was a useful co-ordinating group, it did not always have the support of senior State officials and made very slow progress with contentious issues.

7 At the time, the Commonwealth was spending less than $1 million on labour force programs, excluding the Commonwealth Employment Service (CES).

8 Although State legislation made it compulsory for apprentices to attend formal training, some employers continued to find reasons for not releasing their apprentices.

9 DOLAC was a grouping of the heads of the State and Territory departments of labour that was chaired by the secretary of the Commonwealth department responsible for labour force matters.

10 Significantly, through all the changes in the labour market, the construction industry, which perhaps best embodies the traditional *raison d'être* for apprenticeship, continued to maintain the relatively constant share of overall employment (about 7% to 9%) that it had experienced for 50 years. Clearly, the future of apprenticeship in the construction industry will depend on the way the nature of work evolves, and particularly the extent to which it may become more specialised and 'contractible'. However, taking a long view of history, apprenticeship in the construction sector appears to have survived remarkably well.

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Issues and directions from the Australian apprenticeship and traineeship literature

Stephen Saunders

The National Centre for Vocational Education Research (NCVER) commissioned in 1999 a literature review of the Australian apprenticeship and traineeship system and policies since the introduction of traineeships in 1985. This chapter is based primarily on the references (over 125) and essay of that review.

The first part of the chapter (Issues) discusses the issues raised in the literature. The second part (Directions) proposes directions and measures for the future of entry-level training (ELT) in the broad context of the vocational education and training (VET) system.

Issues

This part discusses the issues under the following headings: supply and demand, the training policy and system, public training market issues, private training investment issues, training market outputs, training intermediaries, pathways and innovations, and quality and performance.

Supply and demand issues

Supply and demand issues are a major influence on ELT debate and policy. A broad issue is whether Australia is delivering sufficient VET opportunities for (young) people. A specific issue is the success levels of the apprenticeship and traineeship system, especially for young people.

Youth unemployment and low school retention were prime concerns of Kirby (1985), who believed that increasing opportunities for young people would sustain Australia's skill base and alleviate unemployment. Similar concerns motivated the Australian Education Council (AEC) report (Finn 1991). Governments embraced Finn's Year 2001 goal that 95% of 19-year-olds should have completed Year 12 or an initial post-school qualification or be undertaking VET. The Mayer (AEC 1992) and Carmichael (ESFC 1992) reports expanded on Finn's key competencies and pushed for cross-sectoral VET networks to deliver an Australian Vocational Certificate Training System (AVCTS).

Perceiving continuing deficits in youth education and training, the Commonwealth Government (Keating 1994) published *Working nation*. The new Commonwealth Government's (Kemp 1996) New Apprenticeships also emphasised VET initiatives in schools and for young people.

Sloan (1994) finds mixed evidence that Australia is a low-training country by the Organization for Economic Co-operation and Development (OECD) standards. Sweet (1995, 1996) is concerned that only 25% of all education and training places available to upper secondary ages are in the VET sector—little more than the 20% of 1985 and well under the 1995 OECD average of 50%. Ball and Robinson (1998), Robinson (1999b), Wooden (1998b) and Misko (1999) are less certain of a large deficit in youth VET places.

Misko notes that around 20% of 15–19-year-old teenagers stayed in VET over 1990–96, while 35–40% of Year 12 completers have transferred across to higher education over 1985–95. Wooden, and Lewis and Kosky (1998) infer that the big post-Kirby shift is the proportion of (15–19 year old) teenagers in *part-time* employment, rather than employment generally. Perhaps 275 000 teenagers (30% of all teenage students, 20% of all teenagers) are said to be in part-time employment and also in school. Their numbers have grown quickly, while teenagers in apprenticeships and traineeships are now 80 000 or fewer. Faster growth of informal work–study options compared to formal ELT and Technical and Further Education (TAFE) may be partly a matter of preference, rather than being forced on young people by failures of government or in the labour market.

Supply and demand for apprenticeships and traineeships

Apprenticeship and traineeship commencements (Robinson 1999b) grew from 53 000 in 1985–86 to 76 000 in 1989–90, falling back to 50 000–65 000 until 1994–95. Over that period, traineeship commencements peaked at 17 000 in 1993. Yet, by 1996–97, traineeship commencements of 54 000 exceeded apprenticeship commencements of 44 000. Apprenticeship and traineeship commencements (NCVER 1999) totalled 134 000 in 1998 and have risen since.

The slow takeup of traineeships is often linked to tight (youth) labour markets, bureaucratic inertia (Robinson 1999b), and inflexible wage and training arrangements (Sweet 1995). Robinson, and Wooden (1998b) explore a supply-side angle, the changing preferences of young people.

The remarkable surge after 1995 does not appear to have been anticipated widely, or well researched after the event. The existence of traineeships in growth sectors of the economy was surely a precondition for growth. Traineeship policy and marketing may have unlocked latent changes in employers' training aspirations and preferences.

The Department of Employment, Education, Training and Youth Affairs (DEETYA 1996), Natarajan and Misson (1998) and Mansfield (1999) attribute the

surge to improved employer incentives and post–1993 promotion, including the National Employment and Training Taskforce (NETTFORCE) established under *Working nation*. Schofield's review (1999) attributes Queensland's ninefold traineeship increase over 1995–98 (3000 to 27 000) to dilution of the youth focus, distortion of employer incentives and hasty user-choice implementation.

Opinions vary on the overall adequacy of Australia's ELT effort. Sweet (1996) claims that the 1995 number of apprentices and trainees is a record Australian low compared to total employment. Robinson (1999b) remarks that total apprentice numbers are 25% below the 1990 peak of 161 000, although there are doubts about the sustainability of the 1990 level.

Natarajan and Misson (1998) suggest that apprenticeships have fallen from the historical norm of 2% to 1.6% of the Victorian workforce. They evidence a modest but telling rise of traineeships over 1989–96 in traditional industry havens for apprenticeships. More optimistic are Pickersgill and Walsh (1998). In international terms, they note, the Australian figure of apprenticeship is high, with 2% of the total labour force in apprenticeship or 10% of total manufacturing employees.

Dandie (1996) finds a reasonably constant relationship between apprentice numbers and the number of tradespeople employed across *all trades* over the past decade. Smith (1998) observes Queensland has maintained apprentices in training in total, and as a proportion of the workforce, since 1989. Finding deteriorations in some trade groups relative to others, Smith urges that apprenticeship–traineeship issues be dealt with industry by industry. The KPMG (1998) study attributes apprenticeship falls (relative to total workforce) to outsourcing, changing skill mixes in production, poor quality of recruits and disappearing public sector apprenticeships.

Ball and Robinson (1998) and Dandie (1996) cite changing skill mixes and labour market requirements as causes of young people's recent shifts away from trade-related VET study. To overcome resistance to trades, Marshman (1998) and the National Electrical Contractors Association (1998) urge greater school involvement in technical training and simpler mature-age trade entry.

DEETYA (1998a) finds that employers have seven suitable applicants per apprenticeship vacancy. The Department of Employment, Workplace Relations and Small Business (DEWRSB 2000) finds National Skill Shortages in 20 trades at May 2000, compared to a dozen or less over 1997–98 (DEETYA 1998b; Steering Committee for Commonwealth/State Service Provision 1999). A concern is that a number of trades currently in national shortage are perennials from the 1987 list (Dawkins 1988).

Rather than growth in demand, DEETYA (1998b) interprets trade shortages to reflect factors such as wastage, lower intakes in the early 1990s, and older tradespersons failing to adapt. Little is said about wages. Wastage from the trades is an enduring concern (State Training Board 1989) in the ELT literature,

the suggestion being that underlying supply rates to the trades would suffice were it not for early wastage. Able young people are more attracted to university education than VET.

In planning for our ELT needs, the local demand trends are at least as important an indicator as international trends in training supply. Concerns about apprenticeship declines appear to be mitigated when *structural* comparisons are made between apprenticeship levels and employment levels in parent trades and industries, rather than employment levels in aggregate.

Admittedly, young people's shares of traineeships (rather than apprenticeships) have declined. Lewis and Kosky (1998), looking back over 1970–95, find that teenage male apprentice numbers are fairly stable at 6–8% of the male 15–19-year-old population. NCVER (1998a, 1999) and Robinson (1999b) point to the ageing of the combined apprenticeship and traineeship intake. Over 50% of new starters in 1997–98 were 20 years or older, correlating with rapid growth since 1995 in clerical–sales traineeships. Smith (1998) contrasts the age stability of Queensland apprenticeships with the jump in trainees over 25, from 12% to 53% over 1994–98. He and Schofield (1999) say this rapid ageing of the intake runs counter to (State) policies on traineeships.

While the Kirby target group was those who have left school aged 16 and 17, it does not follow that youth's falling ELT share is a general failure of VET policy. Robinson (1999b) notes that 15–24-year-olds have maintained their ELT share compared to the total 15–24-year-old population.

Summary themes

Notable since 1985 are the remarkable surges in school-and-work combinations and in traineeships, especially for older people. There is some recent evidence of potential apprenticeship decline or substitution in the face of changing labour market requirements.

The weight of the education, labour market and training data, rather than demonstrating a crisis in VET and ELT preparation for young people, lays down a challenge for traditional apprenticeships to maintain their relevance and flexibility for young people in, and leaving, school. The data also suggest a need to respond to ELT challenges on an industry-by-industry basis.

Noting the 1990 apprenticeship peak, there is a query whether the trades can maintain their current base. Linked to that, there is a major question whether the recent sharp increase in traineeships is the best fit of public VET resources to Australia's ongoing enterprise and economic needs in skill formation, especially in relation to adjacent trade and middle-level skill needs.

Training policy and system issues

The developments in traineeships since Kirby (1985) have been accompanied by remarkable shifts in regulatory and technical arrangements. Without

foreshadowing the Australian National Training Authority (ANTA), Kirby had recommended a broader role for training authorities and moves to competency-based training (CBT) in the trades.

States and Territories moved quickly (Office of ACT Administration 1987; Mitchell, Robertson & Shorten 1999) to repair their training legislation for traineeships and governments (Segal & Johnson 1987; DOLAC 1988; State Training Board of Victoria 1989) began to consider the pros and cons of CBT in trades. They foresaw the difficulties of meshing competency outcomes with time-served aspects of legislation and awards. Such difficulties remain (see ANTA 2000) even after the advent of training packages.

The period 1989–94 was one of profound change in training policy and systems (DEET 1992, 1993). Prompted by the *Training costs of award restructuring* report (Deveson 1990), Commonwealth and State investment in VET began to climb steadily towards the present figure of around $4 billion.

VET ministers agreed in 1990 to the creation of a training market, on implementation of CBT through the National Training Board, a national accreditation framework and a unified ELT system. They agreed to a National Framework for the Recognition of Training with national accreditation, credit transfer, registration of providers, recognition of prior learning, and assessment of competencies.

In 1992, ministers approved the AVCTS for integrated, ELT credentials, and flexible Career Start Traineeships as a bridge into AVCTS. They approved a new VET system with agreed objectives and funding; a public–private training market; and improved opportunities, outcomes and cross-sectoral links. ANTA was set up to develop the system, pooling Commonwealth–State VET funds.

The Department of Employment, Education and Training (DEET 1995), logging 4000 Australian Vocational Training System (AVTS) traineeships by 1994, concluded that a comprehensive, industry-driven system of training could be implemented. FitzGerald (ACG 1994) disputed that the training reforms were industry–enterprise driven. Airing concerns with the National Training Board, he recommended a simpler framework with automatic mutual recognition of training and user-buys training. Smith et al. (1995) found the system had not achieved the VET ministers' target of substantial implementation of CBT by the end of 1993.

NETTFORCE and the National Training Wage traineeships, although having a positive effect on traineeship numbers, were criticised for poor quality (Mathers & Saunders 1995; ESFC 1996). Lundberg (1998) is more positive about the role within AVTS of NETTFORCE, group training companies and other brokers. He points to cross-sectoral impediments as a brake on progress.

Traineeships, the AVTS and FitzGerald's market recommendations were absorbed by the New Apprenticeships reforms (Kemp 1996). *Training for real jobs* emphasised an industry-led training system, more VET in schools, user choice of providers and regional training services.

Taylor (1996) found that increased VET funding had led to increased VET performance but repeated the familiar theme of simplifying the national recognition system. ANTA Board (1997) discusses a new framework of training packages (combining qualifications, competencies and assessment processes), training providers (registered training organisations or RTOs) and training agreements. New Apprenticeships and the Australian Recognition Framework (ARF) took effect from January 1998. ANTA began to endorse training packages, whereby industry training advisory bodies (ITABs) and other bodies develop qualifications, competencies and assessment guidelines for industries and occupations. An Australian Qualifications Framework (AQF) subsumed the TAFE certificate–diploma framework (Robinson 1998b).

Mutual recognition is the key to the ANTA (1999a) update of objectives and principles for the ARF. This is an emphatic version, designed to minimise double handling and case-by-case treatment of recognition, of the principles in the 1992 framework.

Commonwealth, State and Territory training legislation have evolved. The Commonwealth now exercises powers through the 1992 VET Funding and ANTA Acts (Mitchell, Robertson & Shorten 1999). State training authorities now may regulate work placements for VET students (although provisions are patchy), establish and regulate TAFE and other training providers, establish industry advisory bodies and perform recognition functions.

Mitchell, Robertson and Shorten (1999) cite Victoria as the only State adopting industry recommendations (ANTA 1996) to abolish or freeze the declared vocation, a device for formal regulation of ELT in apprenticeships and other non-trade areas. States' different provisions for trade or non-trade vocations, or patchy work placement provisions, may constrain new pathways to qualifications. State training legislation generally prevails over State industrial legislation, but that does not guarantee wage or industrial outcomes commensurate with qualifications.

Summary themes

The themes of post-Kirby developments in training policy and systems are the increases in funding effort, the continual evolution of program offerings and of regulatory elements of the training system and the gradual shift to CBT and (somewhat) more streamlined recognition frameworks.

Also notable is the changing balance between demand and industry-owned elements of the VET system and supply-side or official elements of the system.

Although the industrial relations of training (especially traineeships) has been liberalised, some concerns remain about the extent to which the current legislative and regulatory provisions enable efficient national recognition of training pathways and outcomes.

Public training market issues

The training market concept assumed a particular importance after the Allen Consulting Group (ACG) report (1994). Under the user choice (Kemp 1996) model adopted by the ANTA Ministerial Council, VET funds flow from States and Territories to the provider, reflecting the choice made by the client. New South Wales reserved its position on user choice and only Queensland moved quickly. In 1996 (Steering Committee for Commonwealth/State Service Provision 1998), VET funds open to user choice or competitive tendering varied from 11.6% in Queensland to 4.5% in the Australian Capital Territory. About 100 TAFE and government providers still accounted for 75% of the 1.15 million VET clients in vocational programs in 1998 (NCVER 1998d).

Some critics (WADT 1996; Kilpatrick & Bell 1998; Noble et al. 1999) challenge the assumption that user choice is marginal, counselling governments to minimise its failure in thin markets. Schofield (1999) finds some RTOs failing to provide any training to contracted trainees. Senate Committee (2000) actually recommends a user-choice moratorium.

Anderson (1997a) and Billett (1998) argue that VET students and trainees are not defined as clients and are unlikely to have much impact under current VET planning models. While Moran (1998) espouses VET competition as the key to servicing competitive industries, Anderson (1998) and Robinson (1998b) respond that VET lacks preconditions (multiple buyers and sellers, standard products, supply–demand information) for a truly competitive market. Paralleling Curtain (1995), Anderson considers various supply-side (performance agreements, competitive tendering, preferred suppliers) and demand-side (user choice, fee for service, intermediaries, vouchers) models of VET competition and market reform. Kinsman (1998) leans toward semi-competitive models of VET funding, preferably including vouchers or entitlements.

Kinsman, Robinson (1998b) and Anderson (1997b) suggest the training market emphasis detracts from commonsense efforts to diversify products and services. Kinsman queries the value of increasing the number of providers if choice of content and outcomes remains limited. Noble et al. (1998) suggest user choice may develop in established markets where employers and providers are more (e.g. hospitality) not less (e.g. engineering) able and willing to change arrangements. FitzGerald (ACG 1994) advocates user choice for employer-sponsored contractual training to signal leading-edge demand to providers.

These papers suggest the empirical benefits of user choice are unproven. However, employers have registered an 80% vote (NCVER 1997) for choice of providers—an important signal.

Most of the $4 billion in public VET funds is allocated through State training profiles. NCVER (1998b) finds that ANTA resource allocations have moved responsively towards growth areas of industry. This perceived responsiveness is

partly the coincidence that (as never before) the growth industries are also the growth sectors for ELT, which in turn is an area of firm commitment in recent (ANTA Board 1997; ANTA 1998) VET policies and State training profiles.

Taken together, the NCVER (1998b) and Murphy (1998) monographs imply that the ANTA resource shifts match up with low-output-growth–high-job-growth industries more than high-output-growth–low-job-growth industries. The ANTA (1999b) VET resource plan for 2000 again moves resources towards industry-training areas with the greatest projected 1997–2006 employment growth. Perhaps industries in Murphy's high-output–low-job-growth group might be able to raise their shares of VET funds by accessing user-choice funding.

Summary themes

In effect, Australia already has a mixed, semi-competitive VET funding model. This model may improve efficiency and equity of resource allocation, if not in the highly competitive manner originally intended. Recent VET resource shifts appear to service areas of high job growth rather than high-output or underserviced industries.

User choice is not necessarily very competitive in the VET market. There are concerns that thin markets may not be as well served by user choice. There is still support for something like user buys as was recommended by the ACG. This might be aimed at increasing choice and outcomes (via learning entitlements) rather than at intensifying market competition.

The evidence is that employers would like a choice of providers, but that choice cannot operate effectively without genuine diversity of providers and information for employers and trainees about the products and choices. This links to broader concerns for better information on the economic (supply and demand) reasoning, underlying VET funding allocations to the market.

Private training investment issues

Private Australian expenditure on (structured) training exceeds public expenditure. 'Over 60% of Australia's enterprises provide their employees with some kind of structured or unstructured training each year', writes Robinson (1999a, p.2), 'spending over $4 billion annually on the structural training component'. Nearly all large employers (20+) are said to provide structured or unstructured training, as are many small (20-) employers but not many micro (1–4) employers.

Human capital theorists (Sloan 1994; CLMR 1997) suggest that training costs are shared (optimally) between firms and workers in proportion to respective benefits accrued. The Office of Training and Further Education (OTFE 1998) finds Australian employers following the theory in devoting 70% of their training expenditure to specific in-house training. However, if apprenticeships

are more general than specific training, then apprentices should carry more of the cost than employers. This appears not to be so in Australia, and even less so in certain European countries.

Dockery et al. (1997) deduce an average apprenticeship cost to firms of $22 000, a high net cost in year one shifting to a small net benefit by year four. Nearly all the cost variation is between firms rather than between trade groups. The Centre for Labour Market Research (CLMR 1997) finds a similar cost–benefit pattern in apprenticeships, but also that trainees are as productive as other workers by the end of one year.

Surprisingly, Dockery's firms perceive a net training benefit not cost, perhaps factoring in possible benefits after year four. Norris, Dockery and Stromback (1997) conclude that apprentice-training costs fall 53% to the firm, 28% to the apprentice and 19% to the public sector. The Regional Economic Research Unit (RERU) and Group for Research in Employment and Training (GREAT) (RERU–GREAT) study (1998) finds higher net costs than Dockery and suggests that employers train for social and community motives. The Western Australian Department of Training (WADT 1997) points to altruistic motives in apprenticeship training.

Norris, Dockery and Stromback (1997) measure the social rate of return from male apprenticeship at nearly 13% but are cautious about shifting training costs in the direction of apprentices. Looking at apprentice numbers and employers' cost perceptions, Dandie (1996), Anderson (1997c) and RERU–GREAT (1998) are perplexed by the emphasis on lower apprentice wages as an employer incentive.

OTFE (1998) cites international (if not Australian) evidence from manufacturing and other industries, linking structured training to increased productivity, workplace reform, and retention of skilled workers. OTFE argues that the human–capital paradox of high European enterprise investment in general VET can be explained in cultural terms of strong internal labour markets and low turnover, rather than by strong recognition frameworks, which Australia also possesses.

General training, the OTFE report suggests, may be the best focus for Australian VET funding, although this is the reverse of some arrangements under training packages, where government funds training aimed at specific industry-based competencies. Billett and Cooper (1998), however, point out that the training needs of some enterprises (e.g. in metals, construction and hospitality) are largely met by existing publicly funded VET provisions in recognised apprenticeships and traineeships. Such enterprises may invest less privately in training.

These studies are pertinent to the rationales for State training profiles. Observers may wish to weight public funding towards general or entry-level training but disagree about where specific training turns into general. Emerging

industries may be typecast as having specific training needs, but such industries may also generate high payoffs from public VET investments.

Training levies and incentives

Dawkins (1988) argued that private enterprise was underinvesting in training. Over 1990–94, firms with a $200 000-plus payroll were required to devote 1.5% of payroll to training. The DEETYA (Fraser 1996) evaluation, while positive, concedes that the initiative did not target the low-training industries and small business accurately. Robinson's (1999a) view is that the levy did not promote the training culture, having little impact on very large and very small firms.

KPMG (1998) and Fooks (1998) still favour training levies and the Senate Committee (2000) similarly suggests enterprise-training targets (say 3% of payroll). Robinson (1999a) and Billett and Cooper (1998) note that larger Australian firms are making already larger (structured) training investments than small businesses and are more attuned to the training system.

Dockery (and others) query employer incentives for ELT, which fall well short of observed first-year apprentice costs, as a major factor in recruitment. CLMR (1997) gives employer incentives a generally positive review, but employers claim they would want much higher incentives to lift apprentice–trainee levels. For example, 100% increase in apprenticeship subsidies might induce 40% of employers to take on more apprentices. Employers were found to be more responsive to training incentive raises than training wage cuts, the latter being seen to lower quality of recruits.

The Department of Education, Training and Youth Affairs (DETYA) employer incentives are available for (some) existing employees' upskilling as well as new apprentices and trainees. Schofield (1999) argues that the pre–May 1999 incentives regime encouraged on-the-job or enterprise-specific traineeships at the expense of general ELT needs. After this date, existing employees only attracted the incentive if employed and studying for defined periods. WADT (1997) cautiously endorses discretionary training incentives for upskilling of employees. OTFE (1998) suggests that some government subsidies may entice low-training industries into training but notes that in training the existing workforce, the potential of government to fund training is dwarfed by the benefits of increased employer investment.

Governments may be better placed, OTFE suggests, investing in VET to lever private investments in training. Such investments might include promotion of training, training brokerage for small business and measures for flexibility in training delivery. Catts (1996) suggests that government provide funding to demonstrate the value of structured training to uncommitted small firms.

Summary themes

The size and importance of private training investment is a key message. There are concerns about the training effort of smaller firms and whether VET really has the products and incentives to spur them into training. FitzGerald (ACG 1994) and Billett and Cooper (1998) perceive a failure to realise 'twin' policies of more training and more enterprise sponsorship of training.

Human capital theorists may seek to place government in the realm of general entry-level rather than firm-specific training, although that may include promoting training to non-training firms and for existing company employees. The studies raise doubts about the effectiveness of wage cuts, levies and incentives in solving contemporary and future training problems. That is, only substantial shifts in these measures induce much in the way of enterprise behavioural change.

International findings point to structured training payoffs in terms of productivity and worker loyalty, but there is strong evidence that individual apprentices cost the firm more than the benefit over the training period. The gap is larger than the employer-training incentives available. Significantly, certain trades (and all traineeships) appear to offer a quicker cost–benefit payoff for employers. This may strain employers' social and community motives in training apprentices.

Measuring training market outputs

FitzGerald (1998, p.11) defines the training market as 'that part of the education and training system which provides individuals with the skills and learning expressly required by enterprises and industry'. He distinguishes therein providers, purchasers, clients and outputs. His total purchaser market is met by TAFE ($3 billion), enterprises and suppliers (each $1 billion), and adult and community education, commercial providers, non-profit, skill centres (each 0.2 billion–$0.5 billion).

Robinson (1998b) defines the products and outputs of VET as qualifications, skills and competencies gained by individuals, and skills and competencies required by business. He describes the complex array of qualifications available under the AQF, estimating well over 500 000 enrolments for full qualifications in Trade Certificates or higher (under the old system) plus Certificates III and higher (under AQF) at 1996. Of more than 1.5 million clients in public VET in 1998, NCVER (1998d) counts about 750 000 enrolled for qualifications at or above AQF Certificate III level, or as many as 850 000 including Certificate II.

The trades usually equate to about Certificate III in the new system and traineeships to about Certificate II or III (NCVER 1998a). Enrolments for Certificate II and III qualifications, even if restricted to vocational fields of study, are much larger than those for trades and traineeships. Total TAFE graduations

at Certificate II–III or above in 1997 (NCVER 1998e) appear to be double the 50 000 apprenticeship and traineeship completions in 1997–98 (NCVER 1998a).

Robinson urges simpler AQF qualifications and simpler brand names for apprenticeships. From 1998, apprenticeships and traineeships are no longer distinguished in official New Apprenticeship statistics, although they may differ in skill or occupational labour market terms.

Reporting of trends in vocational certificate and diploma markets is less systematic than that for apprenticeships and traineeships, although these markets include many occupations in engineering, health and community services. They also include higher or post-trade skills, which may not be receiving (Curtain 1996a; Jenkins 1999) enough attention in skill formation policies.

Billett (1998) and Natarajan and Misson (1998), among the few recent writers to compare the trade and middle-level markets, find that declines in Victorian apprenticeships over 1990–96 have gone hand in hand with significant increases in associate diploma courses. State training profiles, Natarajan and Misson note, have moved to reflect these shifts in labour (and student) demand.

Summary themes

ARF, training packages and State legislation are deregulating vocational pathways to certificates in trades, traineeships and related occupations. It is increasingly important to relate the contract–training perspective to measurement of trends and outcomes in the certificate and diploma markets, including the higher trade skills needed for a competitive Australian economy.

It should be a priority to have better comparative measurements of the $4 billion public training effort and the $4–5 billion private training effort. More information is needed to measure and compare the two markets in terms of volume and (for example) the types of industries and firms they serve. This will become increasingly important as efforts continue to develop the training culture and to market the VET products out into emerging industries and medium to smaller firms.

The present forms of measurement encourage the supply-side notion that the public VET market is the stronghold of serious ELT and qualifications, whereas the private VET market conducts other forms of structured or unstructured training.

Training intermediaries, pathways and innovations

Finn (1991) and Carmichael (ESFC 1992) influenced thinking about skill formation in ELT. Carmichael urged integrated VET networks, whereby school and post-school providers would provide flexible pathways for young people toward what is now called AQF 3 or Certificate III level. He proposed industry-based and industrial relations measures to support the pathways.

Progress has been mixed. A similar range of training providers delivers public VET (non-TAFE providers are on a more equitable footing) via similar training intermediaries (New Apprenticeship Centres [NACs] and the Australian Student Traineeship Foundation are newcomers), and progress with innovative pathways is moderate (school-based programs are the exception).

Training intermediaries

ITABs and group training companies (GTCs) continue as important training intermediaries in the post–1998 training system. DEET ceded the ITABs to ANTA management in 1994. NETTFORCE (Keating 1994; Mathers & Saunders 1995) set up Industry Training Companies to lift ELT for young people, in some respects paralleling ITABs. The role of NETTFORCE in the 1995 traineeships surge has been mentioned. It was liquidated in 1998, although some NETTFORCE companies evolved into NACs or other training functions.

Finding only 40% employer awareness of ITABs, Wooden (1998a) suggests ITABs shift more towards advising industry than government. Most training packages are developed by ITABs, which also market and foster the implementation of training. A key issue is the extent to which ITABs and GTCs could foster the training culture in small firms.

GTCs, which rotate apprentices and trainees through (smaller) firms unable to host training on their own, have been regarded favourably in the 1990s. The House of Representatives Standing Committee on Employment, Education and Training (1991) recommended continued GTC support and, as per Carmichael, GTCs helped implement the AVCTS. *Working nation* (Keating 1994) introduced an additional $1000 employer incentive for trainees if they were recruited into GTCs.

ANTA (1996) sought to refocus GTCs on training numbers and small business training. Natarajan and Misson (1998) note that annual GTC apprentice commencements doubled over 1990–96 in Victoria but GTC traineeship commencements increased *tenfold*. The question arises whether the training incentive levers are generating the right skill mixes for enterprises and the economy.

The NACs, administered by DETYA not ANTA, operationalise the regional training services concept of *Training for real jobs* (Kemp 1996). Their objective (DEETYA 1997) is to streamline services to employers, apprentices and trainees, presenting one-stop service for Commonwealth (e.g. incentives) and State (e.g. training agreements) ELT services.

Although the DETYA investment in NACs is commensurate with ANTA investments in ITABs and GTCs, there is little commentary available on their impact on training numbers and on other training intermediaries. Gibb (1999) notes the roles of GTCs (carrying 23 000 out of 123 000 apprentices in 1997), NETTFORCE and NACs in delivering training services to small business. More evaluation of NACs may emerge after the end of the first contract period (1999).

Training pathways

Training pathways may have become more flexible since the Carmichael report, if not in the integrated or cross-sectoral manner envisaged. Pickersgill and Walsh (1998) and Curtain (1996a) contend that employers and industrial relations stifled AVTS innovations, whereas Lundberg (1998) points to cross-sectoral rigidities. He suggests that the extent of CBT implementation is not established. NCVER (2000) implies there is only about 15% penetration by training packages in 1999 VET enrolments for qualifications.

For better use of VET funds, Malley (1997) urges alternative program delivery models whereby ELT could be the first stage of a possible two-stage New Apprenticeship. The models include institutionally based training, traineeships and school–TAFE partnerships. Similarly, the ANTA (2000) *Alternative pathways* report describes trade pathways such as institutional training, front-end off-the-job training, entirely on the job, recognition of prior learning (RPL) plus upskilling, VET in Schools, and traineeships embedded within trades. Traineeships in trades were permitted only in 1994 and school apprenticeships are more recent.

Natarajan and Misson (1998) and Foster (1998) express the hope that training packages will free up traineeship pathways to trades. A regional New South Wales study (RERU–GREAT 1998) tests a first-year apprentice training school option against standard apprenticeships, rating the training school as more expensive in year one but possibly better and cheaper thereafter.

Resistance (Hawke 1992) to VET in Schools may be declining, but Carmichael's senior-college recommendations have had little effect. The National Board of Employment, Education and Training (NBEET 1994) decries cumbersome mechanisms for transfer of credits from school to TAFE and VET. The (1997) Dusseldorp Skills Forum study of VET in Schools finds significant quality variations across States. Misko (1999) cites 1996 data that nearly half of Australian schools provide VET programs but only 10% of students do them. VET-in-Schools numbers exceeded 100 000 (1998) and 130 000 (1999). The Australian Student Traineeship Foundation brokers about half of these.

Lamb, Long and Malley (1998) note that technical high schools of yesteryear offered VET in Schools under other names. Today's programs, they note, could be seen as an informal means of streaming non-academic young people. VET-in-School students, Misko concedes, are less likely than other students to continue in further education and training, but she endorses the programs and suggests they be extended to students on the school-to-university pathway.

Wilson and Lilly (1996) give a mixed review to the first five years of RPL in the VET system. Benefits are sometimes assumed rather than proven and there is great variability in practices and fees. One-fifth of 64 000 1994 TAFE graduates received some form of RPL but often just for prior TAFE study. NCVER (1998a, 1997) finds over 30% of 1997 VET graduates receiving some

form of RPL but only 50% employer awareness of RPL. Possibly, the training packages and Recognition Framework will free up RTOs' use of the recognition-plus-upskilling pathways to qualification. This has the attraction of bringing non-RTO enterprises under the formal training umbrella.

A report to DEWRSB (1998) proposed that the Tradesmen's Rights mechanism—a form of RPL for overseas-trained and local informally trained metal and electrical tradespeople—be brought under the auspices of Australian RTOs. There is a history of special schemes for peak Australian demands and permitting formal upgrade of semi-trade workers. In effect, RPL has always been permitted at the margin for key trades. The opportunity is there to mainstream the process.

ANTA (2000) addresses potential obstacles to new trade pathways such as quality and assessment issues, resistance to school and institution-based pathways, legislation and industrial relations (gaps between competency and wage outcomes) concerns, and articulation from traineeships. Traineeships, presenting fewer obstacles and quicker employer cost recovery, may increasingly substitute for trades in pathways based on training packages.

Training innovation and training culture

Buchanan and Sullivan (1996) commend the public sector role in innovative skill schemes in the construction industry. Down (1998) takes a less positive view, finding that the national reform processes cut across enterprise and shopfloor reforms in the Ford motor company over 1990–95.

Billett and Cooper (1998) have made the point that emerging enterprises enjoy less of public VET funds than those in established industries. Curtain (1996c) observes skill formation in leading edge manufacturing and knowledge firms, which struggle to move from *ad hoc* production toward learning networks and a structure suitable for expansion.

Rather than the cutting edge of business, VET observers appear to be more interested in small business training and the 'training culture'. Victorian employers surveyed by OTFE (1997) dislike ready-made TAFE courses, calling for greater enterprise involvement and more recognition of the value of on-the-job training (including formal use of industry premises).

Gibb (1999) suggests that providers respond to these preferences by training for enterprises in groups or through on-the-job traineeships. Gibb (1998, 1999) suggests small business might prefer a cluster of business development and management services to structured, accredited training.

According to NCVER (1998c), usual VET approaches have only reached about 25% of small businesses, whereas 50% might, or should, train, depending on the right marketing and products. Robinson (1999a) and Smith A (1999) suggest that Australia has more of a training culture than is thought. Robinson notes the large private investment in training ($4 billion or 80% of all

employees) and the 12% of the working age population taking a VET course in 1997. He expresses concern at the apparent wind-back in training over 1990–96 by small (20-) employers.

Following Curtain (1996a, 1996c), Robinson points to the UK Investors in People program and University for Industry (Ufl), to promote a training and learning culture. Analysing national and regional gaps in supply and demand, the Ufl thereby links individuals and enterprises to learning products and services, and franchises new learning centres.

Guthrie and Barnett (1996) query whether the shifts to enterprise bargaining (Hawke & Wooden 1997) have improved the training culture. Only a third of 2000 enterprise bargains they study mention training. If designated, the training provider is often in-house.

Innovative enterprise and award arrangements appear to have an untapped potential to moderate supply and demand problems in the trades. Approving authorities (Kemp 1996) are another recent effort for flexible industrial determinations for apprentices and trainees.

Summary themes

There has been slow progress made on the VET National Strategy's concept of numerous and diverse pathways into VET programs. Most VET funding still falls to traditional providers, with limited participation by schools, universities, private companies or other non-traditional providers.

Industrial relations and cross-sectoral rigidities still impede pathway reform, although this may accelerate through VET-in-Schools programs, school apprenticeships, and traineeships within trades. RPL could offer more enterprises and adult workers a welcome route into the formal training system, addressing the disjunction between the private and public worlds of training.

An issue is the major shift to non-standard employment. Curtain (1996b) attributes shortfalls on Finn targets to limited access to training for young people in non-standard jobs. He and KPMG (1998) urge innovative training arrangements more suited to non-permanent work.

The NACs appear to be a creative but expensive avenue to get (small) employers into the training system. Much of their workload appears to be multi-step administration, despite supposed streamlining of the VET system. Three types of training intermediary—ITABs, GTCs, NACs—promote quality and quantity of structured training. None (primarily) promotes business development and learning exchange, an unmet small business need. The learning exchange concept could bear further Australian examination. Skill centres may also be under-exploited.

Perhaps missing its share of VET funding, although there are positive signs in State training profiles and in user choice, is the cutting edge of manufacturing and the knowledge industries.

Training quality and performance issues

Kirby (1985) framed traineeships as a quality program worth undertaking, arguing for transferable skills and quality off-the-job TAFE training. There were early doubts about the likely quality of the program or its intakes. In that sense, Schofield's report (1999) is nothing new.

The assumption that trade-type training is superior in quality to traineeships or other pathways (including institutional training and RPL) has not been rigorously tested. Various reports (Dawkins 1988; DOLAC 1988; Curtain 1996a; Smith L 1998, 1999) are critical of trade-training quality in terms of its occupational narrowness, or the *ad hoc* competency acquisition and apprentice supervision.

Mathers and Saunders (1995) and ESFC (1996) doubt the quality of the (on-the-job) traineeships mounted to respond to the *Working nation* challenge. Schofield's (1999) report on Queensland traineeships employs broad tests of quality rather than narrow tests of teaching or training quality. She finds that efficiency and effectiveness are in question because of high costs and low completion rates. Fitness and accountability are challenged by breaches in user choice and recognition requirements, service (training delivery) failures and limited official accountability.

This could be read as a caution against on-the-job traineeships or against poor quality processes for rapid growth. Queensland was the only State to open up user choice quickly to all providers. A review parallel to Schofield's counted 68 steps between training registration and completion, suggesting risk management devoted to micro issues rather than ensuring quality of providers.

Recognising these faults, Schofield also recommends a quality control upgrade, an annual government performance statement on traineeships and a balanced suite of strategic and operational performance indicators. The Senate Committee (2000) goes much further, recommending a virtual override of State VET quality processes via a national quality code and authority.

Senate Committee (1995) and Taylor (1996) call for greater performance orientation and measurement in VET funding. Concerns with VET performance information often spring from the training market and user choice. Anderson (1997b) and Robinson (1998b) have argued for more supply–demand information in relation to VET-funding allocations and better VET provider–performance information, to inform customers' user-choice decisions.

FitzGerald (1998, p.17) believes that 'meaningful product descriptors and outcomes measures' are a must before VET user choice can be extended. He finds other national VET systems are doing better in performance management (United Kingdom) and quality systems (New Zealand). Borthwick (1998) discusses recent efforts to increase VET data quality and reliability. She summarises the 1996 ANTA performance measures—participation, graduate outcomes, employer satisfaction, module load completion rates (per VET

dollar), and expenditure per annual hours. The modules emphasis, she notes, arises because few people get qualifications in VET, unlike higher education.

NCVER reports (1998a, 1999) enable measurement of trends in apprentice and trainee commencements and completions or (NCVER 1998e, 1997) VET graduate and employer outcomes. About 73% of TAFE certificate-and-above graduates from 1997 were employed in May 1998, with figures of 80–90% in some courses. The Steering Committee for Commonwealth/State Service Provision (1998, 1999) measures VET performance in terms of outcomes, access and equity, quality and efficiency—that is, participation growth compared to funding, graduate and employer outcomes (as per the NCVER reports), male–female participation and module loads.

Following Taylor (1996), the Steering Committee finds rises in VET participation following rises in VET funding and notes that males and females aged 15–64 have similar shares of VET participation, although males outnumber females in the 15–24 age bracket. The Steering Committee and ANTA (1998) suggest a reasonable match between equity groups' shares of VET and their shares of working age population. Females now take about 46% of total training commencements (NCVER 1999), but the percentage is still much lower in traditional trades.

The Steering Committee (1999) infers a relative lack of information on skill outputs and gaps. The seven key performance measures for VET from 2001 are skill outputs, stocks of skills, employers' views on VET skills, student outcomes, VET client groups' participation and outcomes, public expenditure per publicly funded output and public expenditure per recognised output.

There appear to be enduring gaps in measurement of training in enterprises and measurement of skills outcomes. Customer choice information and supply–demand information in relation to VET funding are also concerns. As with Australian schools, it is difficult to find comparative information on RTOs and their outputs and outcomes (see Curtain 1996a).

Summary themes

There is a consistent theme of concern with the quality of traineeships and traineeship outcomes, more so than with apprenticeships or other pathways. Recent reports are concerned with the quality of on-the-job traineeships but broader problems remain with State VET quality assurance.

ANTA appears to have responded to early concerns about performance orientation and performance measurement in VET funding. Better reports on efficiency and effectiveness are now possible, as measured annually in ANTA reports and also by the Steering Committee for Commonwealth/State Service Provision reports. There is now information on employer and student satisfaction, if not fully addressing information needs to support an informed user-choice market.

If a critical task in VET is that of training providers' building skills for industries and employers, then there are gaps in information about the providers and how (well) they are replenishing industry skill banks. The new VET performance framework for 2001 addresses some gaps.

Directions

The first part describes the growth in traineeships and in VET funding. The training market and theories of private training are canvassed, including the costs and benefits of trade and traineeship training, plus the potential impact of training incentives. New Apprenticeship training is linked to other training opportunities for young people, and public and private training are compared. Training innovation has been assessed, including training intermediaries' responsiveness to changes in employment and business preferences. The quality debate in traineeships and apprenticeships has been reviewed, and gaps between policy directions and information available are discussed, particularly in terms of providers and skills for industry.

Recognising the major achievements in ELT since 1985, this part puts forward a set of propositions to reposition the ELT and VET systems at the leading edge of structural change.

Sharpening training investigation and diagnosis

This article supports calls (Lundberg 1998; Robinson 1998a) for measuring quality in VET research and greater emphasis on ELT. There is a deficit of research sponsored by industry (consumers) and driving towards timely and factual consideration of key issues for ELT in particular industries or occupations. A case in point is the inconclusive investigation of the causes and implications of the 1990s traineeship surge.

The proposition is that government and business sharpen investigation and research for timely diagnoses of critical ELT issues for better policy-making. Relevant research issues are:

- how to lower persistent barriers between VET and other sectors of education and training
- bridging the different standpoints on the overall adequacy of Australia's VET provisions
- testing the adequacy of apprenticeship-and-higher skill provisions in key industries
- comparing the costs and outcomes of traditional versus competitive VET funding
- measuring RTOs comparatively and measuring skill outcomes by industry

- defining and measuring the benefits and costs of enterprise training in Australia
- getting the best value out of the major shifts in the training intermediary market
- testing the potential for lifelong learning models and programs in VET

Repositioning the trades in the training marketplace

The evidence is that employers, if they train, train apprentices for social and community motives as much as for profit. More forceful application of the training and industrial reforms is needed to manage repeated supply and wastage difficulties in particular trades. Changing industry skill mixes and more widespread availability of traineeship-for-trade alternatives lend urgency to the reform task, as traditional apprenticeships may miss (Curtain 1996a) Australia's high-skill needs.

The proposition is that training regulators, providers and intermediaries take concerted action to reposition the trades in the marketplace of training opportunities for talented young people:

- modifying trade-training strictures to respond to the understandable employer preference for the fast cost-recovery and flexibility of traineeships
- persevering with VET in Schools and school apprenticeships—to combat negative trade images and motivate young people towards the trades before lasting career choices are made
- encouraging the intermediaries (ITABs, GTCs and NACs) to plan together for school apprenticeships that are industrially viable and attractive to employers
- training providers conceiving and marketing the trades as a business management opportunity and using the flexibility of training packages to train people that way
- combining the energy and skill of the training intermediaries to unblock training pathways and address regional, industry and occupational declines in the trades
- in key industries, developing overdue (traineeship based) pathways under awards or agreements that will enable quicker skill outcomes, and match trade competencies to rewards
- using the training packages to develop and demonstrate post-trade (higher certificate and diploma) career pathways up to the higher skill levels and higher rewards

Renewing the traineeship consensus

After years of low growth, traineeships are now growing strongly. However, there is underlying disquiet about quality, loss of youth targeting (Schofield 1999) and value for money. Extreme traineeship growth may not be the best fit of public VET resources to economic and enterprise needs in skill formation. Some of this growth relates to employers paralleling enterprise-specific training with publicly provided training.

In view of the large growth in school–work combinations and young people's maintenance of their overall shares of VET and higher education participation, the shifting age composition of traineeships may not be the major loss for young people that is sometimes claimed. Meanwhile, on-the-job traineeships, if managed for quality, could exploit the potential of training packages and the value industry and employers place on job-based training.

The proposition is that government, the training system and business work together to reinforce the common aims and objectives for traineeships:

- perhaps limiting the numbers or proportions of ANTA-funded traineeships, especially in relation to adjacent trade and middle-level qualifications valuable to industry's skill banks
- directing further traineeship growth towards programs which are industrially flexible and respond to the growth in school-based and casual employment
- allowing and encouraging planning profiles to move towards vocational certificate and associate diploma programs, adjacent to traineeships, which are in demand
- revising RTO registration and quality standards, or imposing higher audit levels for RTOs that would wish to offer mainly on-the-job traineeships
- broadening policy input to the regime for DETYA incentives (for NACs and for employers) in view of its effect on traineeship-marketing behaviour
- reviewing regularly the height of the bar for State profile support—or DETYA incentive support—of training for existing employees
- perhaps offering particular (employer or other) incentives to encourage employers and trainees to make use of the traineeships-to-trade career and qualification progressions

Broadening the horizons for new pathways to vocational skills

Although Finn (1991) and Carmichael (ESFC 1992) proposed integrated VET networks and pathways, there remains limited diversity among major training providers and continuing resistance to the legitimacy of schools (even senior

colleges), universities or private companies as full training providers. Meanwhile, there have been major shifts toward school-and-work combinations and other non-standard forms of employment for young people and for others.

If apprenticeships are to retain training shares in key industries that experience skill shortages, then changes in labour markets should be reflected in more flexible pathways to skills. Recent work emphasises the relationships of ELT pathways to other pathways into work, VET and higher education. The vocational certificate market is twice as large as that of New Apprenticeships.

With the adoption of training packages incorporating flexible pathways to Certificates II–III (New Apprenticeships level) and other adjacent qualifications, it seems time for a shift in planning focus if not funding priorities. Present legislation, industrial relations and VET funding provisions do not always encourage the realisation of new pathways.

The proposition is that the ELT horizons should expand to include new agencies and pathways which broaden the routes to vocational skills:

- improving the dialogue between VET planning and other sectors of education and giving practical or program encouragement to RTOs which are schools, universities or companies
- identifying and reducing legislative, industrial relations, and VET funding, biases against new pathways toward trade qualifications and adjacent VET qualifications
- improving VET policy and granting reliable VET seed funding for promising new routes to qualifications that use institutional, apprenticeship, or recognition, pathways
- encouraging casual-employment-focussed RTOs, and industrially recognised pathways to skills, to accommodate the unmet needs of people in non-standard forms of employment

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Testing new approaches to training markets

The VET training market policies are now taking effect as a reality, user choice and other competitive measures carving out an appreciable share of total public VET funding.

User choice could be improved and other forms of consumer-oriented VET provision merit consideration. This might include training or learning entitlements. Calls continue for better information on the VET market and providers and a more inclusive view of the clients.

Theorists argue that user choice is best suited to larger or well-developed training markets, although it can also encourage training innovation. There are concerns with user choice in thin regional markets. VET appears to be a market of diversity and quality rather than commodities.

There is room for improvement in the transparency and targeting of the main volume of VET funding (not yet subject to competition). Recent resource shifts appear to target high job growth areas rather than high output areas or those less used to VET funding. Emerging or cutting edge areas of (export) industry may have high skill needs but lack recognised forms of ELT.

The proposition is that there is a continuing need to consider and test more diverse approaches to training markets and funding:

- sharpening training product information for the market and for tendering purposes
- improving comparative provider (RTO) information and feedback to support user choice
- targeting of user choice and competitive funding more towards large VET markets or areas of industry innovation where they may have the best impact
- putting more weight on apprentice and trainee views in market feedback and in user choice
- reconsidering and testing new measures for choice, such as student learning entitlements or learning credits, for some sectors or higher levels of the training market
- improving policies and widening the avenues for cutting edge industries and their emerging enterprises to gain a share of mainstream VET funds or user-choice funds.

Widening the avenues for structured training in enterprises

It is often argued that governments should underwrite general vocational training rather than specific company training, although a role is seen for promoting structured training to non-training firms and for existing employees.

The evidence is that training levers (incentives and wages) have to be moved quite a distance to induce changes in enterprise behaviour. Standard VET products and qualifications are not always the best fit to small business, responding only indirectly to its productivity needs.

Although the new recognition frameworks are simpler than their predecessors, they are still complex for enterprises and vary across jurisdictions. While the existence of the ARF and training packages are steps forward, these complex entities are not marketing tools in themselves. Meanwhile, there is (some) evidence of increasing enterprise and student use of RPL.

The proposition is that there are opportunities to increase industry participation in structured training and make it a better match to enterprise training needs by:

- improving industry tools to advertise the implements and benefits of structured training

- promoting productivity and workplace gains as prime motives for business training
- persevering with on-the-job traineeships—an expressed small business preference
- seed-funding non-training enterprises that want to try or re-try structured training
- rewarding RTOs and encouraging enterprises to use RPL and workplace assessment, which brings enterprises into the formal-training system short of them also becoming RTOs
- encouraging cadres of enterprises to become full RTOs, to diversify the market and provide downstream training to smaller firms
- maintaining, on equity and efficiency grounds, some limited VET funding and employer incentive support for existing employees undertaking training for qualifications

Using intermediaries to develop new learning pathways

Various training intermediaries—industry training bodies, GTCs, NACs, and until recently NETTFORCE—in one way or another play important roles in fostering the quality and quantity of ELT. These agencies have supported the growth of traineeships and the maintenance of apprenticeships.

Australia has elements of a training culture in terms of the sizeable private sector role in training and appreciable working age participation in public VET. Australian training intermediaries foster entry-level and CBT training rather than learning or skill exchange.

More effective use of available VET funds could be won if the intermediaries could do more to (a) foster innovative pathways to vocational skills and (b) disseminate training and learning as enterprises want it, with business development and problem-solving coming ahead of CBT.

The proposition is that growth and maturity in the VET system will be encouraged by fostering diversity among training intermediaries and introducing new learning-oriented intermediaries:

- encouraging and rewarding the existing intermediaries to collaborate to develop new pathways to skills on a regional basis
- tasking the intermediaries to promote and service innovative pathways to New Apprenticeship and certificate skills, and changing the outcome measures to reward them if they do
- specifically, tasking the training system and one or other of its intermediaries to develop traineeships, and pathways to skill outcomes, for casual employees

- introducing more of the newer style industry and technology (e.g. in manufacturing) centres of excellence into the Australian skill and training equation
- trialling business skill and learning exchanges, perhaps by adapting elements of the British UfI and the Australian skill centres for industry
- scoping a major investment in a business skill and learning exchange for Australia

Reinforcing priorities for training measurement and quality

The continuing concern with traineeship quality is in the Schofield (1999) report, which points to audit and devolution issues. Less attention falls on quality in the trades and other VET pathways.

As ANTA refines key performance measures for VET, some areas of performance could be given greater prominence, such as reporting of vocational outcomes (compared to apprenticeship outcomes) and of private training investment. More comparative information on RTOs, to support informed user and student choice, would close a loop on the credibility of the market.

Comparing expenditure to outputs measures supply side questions (interjurisdictional efficiency in VET) more than demand. The moves to measure skills stocks against industry demand are commendable, but the demand side (effectiveness of VET for industry) questions could also be measured by comparing skills in industry or occupational groups against VET resources put in.

The proposition is that emerging directions in VET performance and quality ought to be encouraged and refined for better allocation of funds and better service to clients:

- upgrading quality requirements for RTOs, especially for high-volume traineeship providers
- implementing measures to assess quality objectively and comparatively across the breadth of training pathways to traineeships, trades and equivalent middle-level occupations
- monitoring and reporting objectively the participation and outcomes in the VET pathways and VET occupations which are adjacent to New Apprenticeships
- conducting more, and more objective, measurements of private training investment compared to public training investment
- governments developing or funding comparative information on RTOs (good provider guides) to place employers and trainees on an informed footing for choice

- accelerating the work on skill outputs and industry skill stocks, while ensuring it is fed back simply and effectively to industries and regions to encourage their further input
- developing productivity measures, to compare VET skills outputs (and stocks) to inputs

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Determinants of apprentice training by small and medium-sized enterprises

Katrina Ball
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Introduction

THE OBJECTIVE OF this research is to identify the key determinants of apprentice and trainee employment in Australian small and medium-sized enterprises. The entry-level training activities of small and medium-sized enterprises are of interest because they account for a significant and growing proportion of Australia's total employment.

In a study of the structure of Australian business, the Department of Employment Workplace Relations and Small Business (DEWRSB 1999) found that about 95% of all enterprises in Australia were private-sector 'small enterprises'. In an analysis of employment generation the Australian Bureau of Statistics (ABS) reported that in 1996–97 small enterprises contributed 53% of Australia's total job generation and that private small enterprise employment accounted for 42% of total Australian employment (ABS 1998). These findings were supported by the Productivity Commission which found that Australian firms with less than 20 employees accounted for 53% of new employment over the ten years prior to 1994–95 (Productivity Commission 1996).

The Productivity Commission (1996) attributed the expansion of employment in small enterprises to the contraction in the share of public employment, increases in the sectoral employment share of services and the reduction in the average size of a manufacturing firm.

In a related study examining the changing nature of work and its implications for vocational education and training (VET) in Australia Waterhouse, Wilson and Ewer (1999) reported:

> *The scale [size] of the enterprise . . . in which employment is found has changed . . . Self employment grew by 255 000 people between 1986 and 1993; the number of employees working for firms employing fewer than 20 people increased from 1 271 000 to 1 509 000 over the same period, while enterprises employing more than 100 people shed some 7000 jobs.*
>
> (Waterhouse, Wilson & Ewer 1999, p.8)

Waterhouse, Wilson and Ewer (1999) attribute the growing importance of small enterprises to shifts in Australia's industrial composition. Significant changes which have affected the employment composition include the downsizing and privatisation of public utilities and contractions in manufacturing employment.

Employment opportunities and conditions found in small and medium-sized enterprises differ from those in medium and large enterprises. According to the Productivity Commission (1996), part-time employment is more prevalent in large enterprises than small enterprises. Interestingly, casual employment (no access to paid sick leave) is more prevalent in small enterprises. Labour turnover tends to be higher in small enterprises; small enterprises tend to expend less on staff training and average hourly rates of pay are lower for employees of small enterprises. Braddy (1998) suggests that employment opportunities and the entry-level training efforts of an enterprise are inextricably linked. While many positions involving entry-level training are newly created, current employees transferring into a training contract will fill other positions in the training system.

Small and medium-sized enterprises

The terms 'small enterprise' and 'small and medium-sized enterprises' have been defined in a number of ways. Depending on the institutional or historical context, the major criteria for defining the size of enterprises include legal status, ownership status, the distinction between the operation of an enterprise at a craft or industrial level, or the industry in which a firm operates. The ABS has generally used business size categories to define small and medium-sized enterprises. The scope of this analysis will be the employment size of the enterprise, not the workplace.

The ABS defines small enterprises as those which employ less than 20 people. This definition also includes enterprises regarded as micro businesses—those employing less than five people. Medium-sized enterprises are, however, considerably larger and are defined as those enterprises employing more than 20 but less than 200 people.

Apprentices and trainees in small and medium-sized enterprises

The potential for entry-level training has now been expanded beyond the traditional realms of the trades, and apprenticeships and traineeships are available in a wide range of occupations and industries. In 1999, there were about 100 occupations in which an apprenticeship or traineeship could be undertaken. Analysis of data from the national contracts-of-training database reveals that between 1996 and 1999 there were more than 30 additional occupations in which apprenticeships and traineeships were undertaken.

Research conducted by the Department of Employment, Training and Youth Affairs (DETYA 1997) found that the larger the size of an enterprise the more likely it was to attract suitable applicants for apprenticeships. While only three suitable applicants were available to enterprises with below ten employees, more than eight were available to enterprises with more than 100 employees.

Notwithstanding these research findings, small and medium-sized enterprises account for a high proportion of contract commencements. Between 1996–97 and 1998–99 small and medium-sized enterprises accounted for between 59% and 66% of all known commencements (see table 1).

Table 1: Commencements of contracts of training by employer size (%), 1996–97 to 1998–99

Size of enterprise (known)	1996–97	1997–98	1998–99
Small	51.0	48.6	40.7
Medium	15.6	17.5	18.6
Large	33.4	33.9	40.7
Total known %	**100.0**	**100.0**	**100.0**
Total known* (number)	**49 265**	**67 522**	**96 601**
Total (number including unknown)	**93 500**	**122 500**	**160 200**

Source: NCVER contract of training statistics, unpublished data
Note: * approximately 45% of contract-of-training commencements by enterprise size are unknown

Private sector employers and group training companies were responsible for the majority (93%) of Australian apprentices and trainee commencements during 1998 (NCVER 1999). There were about 103 000 private sector commencements in 1998, while commencements with group training companies were over 21 000.

Because of the increasingly important role played by small enterprises in providing entry-level employment and the expansion in the range of occupations available to apprentices and trainees, it is important to examine the key determinants of entry-level training in small and medium-sized enterprises.

Previous research

ABS (1997) statistics on training expenditure show that 13% of enterprises employing between one and 19 employees provide some training, compared with 51% of enterprises employing between 20 and 99 employees and 88% of enterprises with 100 or more employees. The Bureau of Industry Economics (BIE 1991) suggests that training of employees in small enterprises is low owing to the low level of managerial and training skills of small enterprise owners and managers.

Differences exist between the extent and type of training provided by enterprises with different characteristics (for example, industry, size and

history). In addition, the method of training delivery also differs between enterprises. Small and medium-sized enterprises do not simply demand different levels of training by comparison with large firms, they also express and fulfil this demand in a myriad of ways (Smith & Hayton 1999). Smith and Hayton identified major determinants affecting the training efforts of enterprises and developed a general model representing enterprise training. Factors found to significantly affect the provision of training by enterprises included:

- competitive pressure
- work re-organisation
- new technology
- quality processes
- industrial and award restructuring
- size of the enterprise
- training infrastructure
- level of training decision-making

It has been suggested by Ridoutt (2000) that other factors, including the occupations of workers employed, sector of employment (public versus private), size of the enterprise and employment status of employees all exert an influence on the extent of training provision. Ridoutt provides examples from the ABS survey of education and training experience which show how these characteristics of enterprises have affected the provision of on-the-job training.

Long et al. (1999, table 5) have compiled a matrix of the factors which result in higher incidence of training provision. The matrix presents common findings of researchers examining the 'drivers' of training provision. Large firms, firms working in finance and business services, the public sector and economy-wide full employment (although low unemployment may also be a driver) are common characteristics related to high levels of training provision.

Blandy et al. (1999) conclude that the type of training provided by firms is directly related to the presence of internal labour markets, capital investments and competitive production conditions.

If enterprises are to undertake training of staff then it must be seen as beneficial to do so. This is especially important for small enterprises which are less willing to adopt untested practices and processes. While it is generally agreed that training does produce benefits for enterprises and individuals (Billett & Cooper 1997), few studies have agreed on the extent of benefits derived by enterprises from the provision of training. Studies of the effect of training on enterprises have tended to be based on marginal productivity of workers and their contributions to production.

While it is agreed that training is beneficial to all enterprises to ensure their competitiveness and profitability, the conditions facing enterprises in the

employment and organisation of staff do affect the type of training provided and the methods used for training. The employment and organisational characteristics of enterprises differ between industries, size of enterprises and regions.

While there has been considerable research undertaken which examines the influences on training provision, there has been only limited research on specific influences on entry-level training. Examining employers and group training companies, the Department of Employment, Training and Youth Affairs (DETYA 1997) identified business activity, employment subsidies and the supply of suitable applicants as the key drivers in determining the extent of Australian enterprises' entry-level training efforts. Kapuscinski (forthcoming) undertook a quantification of the influences on entry-level training using unit record data from the ABS training expenditure and training practices surveys. Kapuscinski's research presents a set of factors which he believes exerts profound influences on the provision of apprentice and traineeship training. The characteristics of firms found to affect the provision of entry-level training include:

- size of firm
- age of firm
- share of full-time and permanent employees
- competitiveness of firm relative to industry

In addition to the characteristics of firms, it was the training culture, measured by Kapuscinski as the average training expenditure per worker, which was also shown to have a positive influence on the provision of entry-level training.

Data and analysis

The analysis uses the unit record level data from the four waves of the business longitudinal survey (BLS) from 1994–95 to 1997–98 conducted by the ABS (1999). The surveys involved national questionnaires sent to a sample of approximately 13 000 businesses selected from the ABS business register. Only those businesses employing less than 200 employees were included in the scope of the survey. Attrition of enterprises occurred over the survey period and enterprises did not respond to all surveys.

The analysis selected only small and medium-sized enterprises from the data (enterprises with less than 100 employees in 1997–98) and those enterprises which had responded to all surveys. Only enterprises that continued in the survey over the four waves of the survey were included because of their ability to provide trend data related to business practices and business characteristics which could then be related to training responses from the 1997–98 survey. Despite careful selection of the enterprises included in the sample, some questions included in the compilation of variables for the analysis had missing responses.

Variables were created for the firm to represent the demographic characteristics of the decision-maker of the firm, level of employment and employment trends, training practices, type of training, training providers used, business characteristics and practices, business changes and trends, business intentions and the financial performance of the enterprise.

In 1997–98, for the first time the survey included a question which asked respondents to estimate the percentage of persons during the financial year employed in the business that were trained in 'trade and apprenticeship training and traineeships'. The options available for responses were 'none', 'up to 25%', '26% to 50%', '51% to 75%' and '75% to 100%'. Responses to this question were used to create a variable to represent whether or not a firm participated in trade and apprenticeship training and traineeships. Responses were divided into 'yes' and 'no' responses. There were 697 (22%) enterprises in the 'yes' category and 2466 (78%) enterprises in the 'no' category.

The data-collection method does not allow segregation by type of entry-level training—apprenticeship or traineeship. Therefore, the findings reported refer to total trade and apprenticeship and traineeship training.

Probit regression analysis was undertaken to model the factors influencing the likelihood of enterprises participating in trade and apprenticeship training and traineeships. A detailed discussion on the regression results, including the Wald-Chi square test statistics and odds ratios, is provided in Ball and Freeland (2001). The 95% level of significance was used to evaluate the regression results.

Characteristics of enterprises that emerged as significant influences on the propensity of small and medium-sized enterprises to participate in trade and apprenticeship training and traineeships are shown in table 2.

Factors affecting provision of apprentice and trainee training

The impact of both training and non-training characteristics on the propensity of a firm to provide entry-level training was examined. The significance levels and odds ratios for individual variables included in the analysis are shown in table 3.

Table 2: **Significant characteristics influencing the propensity to provide entry-level training**

Significant characteristic (group of variables)	Type of influence
The industry in which the enterprise operates	Not applicable
The educational background of the decision-maker	Positive
If the enterprise is considered to be a family business	Positive
Expanding levels of trade union membership	Positive
Provision of 'other' training to staff	Negative
Employers or owners providing structured training	Positive
Associations providing training	Positive
TAFE institutes providing training	Positive
Universities providing training	Negative
Provision of structured training	Positive
Provision of on-the-job training	Positive
Provision of seminars, conferences etc.	Positive
Intended increased numbers of business locations	Negative
Low level of full-time employees	Negative
Greater size of enterprise	Positive
Increasing level of employment	Positive
Skills–needs ratio (ratio of new employment to total employment)	Positive

'Non-training' enterprise characteristics

The 'non-training' enterprise characteristics that significantly influence the provision of entry-level training by a firm are:

- the industry in which the enterprise operates
- the educational background of decision-maker
- whether or not the enterprise is considered to be a family business
- expanding levels of trade union membership among employees
- the intention to increase the number of business locations
- the size of the enterprise (entry-level measure)
- increase in employment
- level of full-time employment
- increasing skills–needs ratio (measured by the ratio of new employees to total employment)

Table 3: Significance levels and odds ratios for variables

Variable description	Odds ratio
Non-training characteristics	
Industry	
Mining	0.72
Construction	1.41
Wholesale trade	0.29*
Retail trade	1.11
Accommodation, cafes & restaurants	1.34
Transport & storage	0.62
Finance & insurance	0.04*
Property & business services	0.20*
Cultural & recreational services	0.34
Personal & other services	1.17
Open more locations	0.73
Unincorporated business	1.29
Age of business	
Less than 8-years old	1.01
16 to 20-years old	0.75
20 or more years old	0.81
Female decision-maker	0.80
Highest level of education of decision-maker	
School	1.20
Trade qualification	1.89*
Considered to be a family business	1.32*
Percentage of union membership amongst workers	
Up to 10% union membership	0.79
11 to 25% union membership	1.10
26 to 100% union membership	1.03
Expanding union membership among workers	1.71*
Major change in business structure	0.93
Increasing real wage bill	0.94
Major change in range of products or services	0.97
Major change in advertising	1.04
Major change in distribution	0.95
Major change in export markets targeted	0.92
Contracting-out	1.15
Major change in production/service technology	0.89
Intend to significantly increase production levels	1.17
Intend to open new locations	0.71*

Variable description	Odds ratio
Training characteristics	
Percentage of workers participated in job rotation, exchange etc.	
Up to 25% of staff	0.93
26 to 50% of staff	1.13
51 to 75% of staff	0.87
76 to 100% of staff	1.13
Percentage of staff participated in on-the-job training	
Up to 25% of staff	6.09*
26 to 50% of staff	5.93*
51 to 75% of staff	5.19*
76 to 100% of staff	3.87*
Percentage of staff participated in seminars, workshops etc.	
Up to 25% of staff	1.09
26 to 50% of staff	1.02
51 to 75% of staff	1.61
76 to 100% of staff	3.42*
Percentage of staff participated in structured training	
Up to 25% of staff	2.86*
26 to 50% of staff	3.26*
51 to 75% of staff	3.98*
76 to 100% of staff	2.54*
Employers or owners of business providing job training	1.10
Employers or owners of business providing structured training	1.40*
Training provider	
Associations providing training	1.39*
TAFE providing training	11.01*
Private training providers providing training	0.89
Universities providing training	0.60*
Increased level of training provided in 1997–98	1.51
Percentage of staff received management training	
Up to 25% of staff	1.06
26 to 50% of staff	1.25
51 to 75% of staff	1.03
76 to 100% of staff	0.44

Table 3: Significance levels and odds ratios for variables (cont.)

Variable description	Odds ratio	Variable description	Odds ratio
Non-training characteristics		Training characteristics	
Intend to maintain or commence exporting	0.87	*Percentage of staff received professional training*	
Intend to introduce new goods or services	0.84	Up to 25% of staff	0.90
		26 to 50% of staff	0.78
		51 to 75% of staff	1.14
Had quality assurance processes in 1996–97	0.91	76 to 100% of staff	1.34
Business plan	0.87	*Percentage of staff received health and safety training*	
Undertake e-commerce activities of sales or purchase	1.08	Up to 25% of staff	0.98
		26 to 50% of staff	0.79
		51 to 75% of staff	0.72
Increasing value of research and development expenditure relative to total expenditure	0.79	76 to 100% of staff	1.01
		Percentage of staff received 'other' training	
Compare business practices with other businesses	1.08	Up to 25% of staff	0.82
		26 to 50% of staff	0.69
Use e-mail	0.80	51 to 75% of staff	0.41*
Had a web homepage	1.07	76 to 100% of staff	0.18*
Increased level of male employment	0.80		
Percentage of employees employed full time			
1 to 20% of employees	0.24*		
21 to 40% of employees	0.74		
41 to 60% of employees	0.92		
Number of employees			
6 to 10 employees	1.35		
11 to 15 employees	1.59		
16 to 20 employees	1.58		
21 to 40 employees	2.67*		
41 to 60 employees	2.59*		
61 to 80 employees	3.16*		
81 to 99 employees	4.14*		
Expanding employment	1.36*		
Expanding part-time employment	0.89		
Exporting business	0.91		
Increasing real value of sales	0.94		
Profit 1994–95	0.84		
Profit 1995–96	0.88		
Profit 1996–97	0.84		
Profit 1997–98	1.10		
Increasing debt to equity ratio	0.98		
Increased profit 1994–95 to 1997–98	0.90		

Note: * indicates variable significance at 95% confidence level

Industry

The industry in which an enterprise operates has a significant influence on the provision of apprentice and trainee training. When compared to manufacturing, enterprises from industries that were significantly less likely to provide apprentice and trainee training include wholesale trade (70% less likely), finance and insurance (96% less likely) and property and business services (80% less likely). Notably, enterprises in finance and insurance were the least likely, relative to manufacturing, to provide apprentice and trainee training. The provision of apprentice and trainee training for manufacturing enterprises was not significantly different from provision by enterprises in the industries of mining, retail trade, accommodation cafes and restaurants, transport and storage, cultural and recreational services or personal and other services.

Characteristics of decision-maker

The characteristics of enterprise decision-makers examined were gender, highest education level attained and whether or not they were operators of a family business.

The gender of the decision-maker of the enterprise does not have a significant influence on the provision of apprentice and trainee training. However, the educational achievements of the decision-maker significantly influence the propensity of enterprises to provide apprentice and trainee training. When compared to enterprises whose decision-makers listed university as their highest educational achievement, enterprises with decision-makers who reported a trade as their highest education were significantly more likely to provide apprentice and trainee training. Enterprises with trade-educated decision-makers were more than 80% more likely than enterprises with university-educated decision-makers to provide such training. There was no significant difference between the provision of apprentice and trainee training by businesses with university or school-educated decision-makers.

Employment

The size of the enterprise significantly influences the propensity of the enterprise to provide apprentice and trainee training. When compared to enterprises employing between one and five employees, enterprises with more than 20 employees are significantly more likely to provide apprentice and trainee training. Interestingly, there is no significant difference in the level of training provision among small businesses. The likelihood of firms providing apprentice and trainee training increases in proportion to the size of the enterprise.

Enterprises with a high percentage of their workforce employed full time are more likely to provide trade and apprenticeship and traineeship training than other firms. Enterprises with less than 21% of their employees employed full

time are significantly less likely to train trade apprentices and trainees than enterprises which have between 61% and 100% of their employees employed full time.

Employment trends

Enterprises that expanded total employment between 1994–95 and 1997–98 were significantly more likely to provide apprentice and trainee training than enterprises with stable or declining employment levels. Although the proportion of the workforce employed full time influences the propensity of an enterprise to train trade apprentices and trainees, analysis of employment data found enterprises with increasing rates of part-time employment are no less likely than other enterprises to train trade apprentices and trainees.

The level of union membership among workers of an enterprise is not a significant influence on the provision of apprentice and trainee training. However, enterprises with workforces which expanded their union membership between 1994–95 and 1997–98 were more likely to provide apprentice and trainee training than those enterprises whose workforces experienced declining or stable levels of union membership.

Enterprises with increasingly male-dominated workforces are no more likely to provide apprentice and trainee training than other enterprises.

A skills–needs ratio was derived to identify enterprises with an increasing proportion of new employees to total employees between 1996–97 and 1997–98. The skills–needs ratio measures new employment as a proportion of total employment. An increasing skills–needs ratio significantly increases the propensity of enterprises to provide apprentice and trainee training. Enterprises with increasing skills–needs ratios were 50% more likely to provide apprentice and trainee training than other enterprises.

Business characteristics

The legal classification of the organisation, incorporated or unincorporated, and the age of the business do not have a significant influence on the provision of apprentice and trainee training. However, enterprises that are considered to be a family business are more likely to provide trade apprentice and trainee training than other enterprises.

Business changes

Expansion of business locations does not influence the likelihood of an enterprise providing trade apprentice or traineeship training. Major changes to the business practices and operations were examined in the analysis. Changes examined included major changes to the range of goods and services produced, the advertising, export marketing, the distribution of goods and services, production technology and major changes to the business structure. None of

these major business changes were found to impact on the propensity of enterprises to provide apprentice and trainee training.

Business intentions

The BLS contains data representing the business intentions of enterprises for the next three years. Business intentions examined by the BLS relate to changes in the number of locations, levels of production, exports and the introduction of new products or services. Only the intention to open new locations in the next three years was a significant influence on the provision of apprentice and trainee training. Enterprises intending to open new locations were significantly less likely to provide apprentice and trainee training than enterprises that did not have expansionary intentions. This result is not surprising as enterprises opening new branches would require staff to be self-sufficient and fully trained if they are operating remote sites.

Business practices

The business practices of firms were examined to determine any influence on the provision of apprentice and trainee training and included quality assurance, business planning and comparison, e-commerce activities, use of computers, exporting and contracting-out. Enterprises that export goods or services are significantly less likely to provide apprentice and trainee training than enterprises that do not export.

None of the other business practices examined in the analysis were shown to significantly affect the propensity of the enterprise to provide apprentice and trainee training.

Finances

The profitability of enterprises was measured for four continuous financial years beginning 1994–95. There is no significant difference in the likelihood of profitable enterprises providing apprentice and trainee training than enterprises that did not provide a profit.

Other business characteristics are represented by differences in characteristics over the four waves of the longitudinal survey. Characteristics examined included increasing sales revenue, increasing profit, increasing wage bill, increasing percentage of spending on research and development and increasing debt-to-equity ratio. None of the financial characteristics was found to have a significant impact on the propensity of an enterprise to provide apprentice and trainee training.

This finding implies that innovative enterprises (those increasing spending on research and development) are no more likely than other enterprises to provide apprentice and trainee training.

'Training' enterprise characteristics

A number of training-based characteristics were found to significantly influence the provision of entry-level training. The training practices, type of training and providers of training were all found to influence the propensity to provide entry-level training.

Training practices

Enterprises which increased their overall levels of staff training were no more likely to provide apprentice and trainee training than enterprises which maintained or reduced their overall level of staff training.

The approach to training delivery was examined in relation to the propensity of enterprises to provide apprentice and trainee training. Two formal methods of training delivery, structured and on the job, were found to significantly influence the propensity of enterprises to provide apprentice and trainee training. The higher the percentage of employees receiving structured training (up to 75%) the higher the likelihood that the enterprise would provide apprentice and trainee training.

Enterprises that provide staff with on-the-job training are significantly more likely to provide apprentice and trainee training than other enterprises. Interestingly, there was little difference in the likelihood of firms that provide more than 76% of their staff with structured training also providing apprentice and trainee training compared to enterprises that provide between 26% and 50% of staff with structured training. It would appear that firms that provide more than a quarter of their staff with on-the-job training are significantly more likely to train apprentices and trainees than other firms.

Firms that use the informal training method of job-rotation and job-exchanges are not likely to provide apprentice and trainee training. Enterprises providing 76% or more of staff through seminars, workshops or conferences training had a greater propensity to provide apprentice and trainee training than other enterprises.

Type of training

The types of training examined in the analysis were management training, professional training, health and safety training and 'other' training. In general, the type of training provided does not influence the propensity of enterprises to provide apprentice and trainee training. However, enterprises providing between 76% and 100% of their staff with 'other' training have a significantly lower propensity to provide apprentice and trainee training than do firms which provide no 'other' training.

Providers of training

A number of types of training providers were included in the analysis to determine whether there were any differences in the propensity of firms to provide apprentice and trainee training according to the type of training providers used. Classifications of training providers used in the analysis were:

- employers or owners of enterprises providing on-the-job training
- employers or owners of enterprises providing structured training
- associations providing training
- Technical and Further Education (TAFE) providing training
- private training providers providing training
- universities providing training

There was no difference in the propensity to train trade apprentices and trainees for enterprises which provided on-the-job, structured training or used private training providers compared with enterprises which did not use these providers.

Enterprises that utilised either associations (professional and industry) or TAFE for training were significantly more likely to provide apprentice and trainee training than other enterprises. Enterprises using TAFE as a training provider were more than ten times more likely to provide apprentice and trainee training than enterprises that did not use TAFE to provide any training. The use of associations for the provision of training increased the odds of also providing apprentice and trainee training by more than 1.3 times.

Emphasising the educational divide, and supporting theories relating to training culture, enterprises using a university to provide training were significantly less likely to train trade apprentices and trainees than other enterprises.

Conclusions

The results from the regression analysis support many of the findings of training drivers presented in the literature review. It is likely that some of the variation in results between this and other studies is owing to the use of different data and research methods.

The analysis provides no evidence of a single business characteristic acting as a trigger for small and medium-size enterprises to provide apprentice and trainee training. However, employment characteristics do affect an enterprise's propensity to undertake apprentice and trainee training. Larger firms and firms with a high proportion of full-time staff are more likely to provide apprentice and trainee training than other firms. Firms that are expanding in size within the confines of their existing sites are also likely to provide apprentice and trainee training. The analysis provides evidence which supports claims by

employers that more stable economic conditions and the ability to expand their enterprise increases the propensity to train trade apprentice and trainees.

Claims by Braddy (1998) that employment and training are inextricably linked are supported by the relationship highlighted in this analysis between expanding employment, the skills–needs ratio and the provision of apprentice and trainee training.

The most important result of the regression analysis is the support provided to the concept of a training culture. Different studies have defined a training culture in different ways—such as, Kapuscinski's (forthcoming) expenditure measure and business planning, and the decision-maker's commitment to training (Smith & Hayton 1999). This analysis provides evidence of a significant effect of a training culture on employers' propensity to provide entry-level training.

There are a number of elements of a training culture in small and medium-sized enterprises that emerge from the analysis of the BLS. The training experiences of enterprise decision-makers are a crucial factor influencing the decision to train apprentices and trainees. If the head of a firm has a trade qualification then the firm is highly likely to conduct apprentice and trainee training. Firms that undertake programs of formal structured training and on-the-job training for their employees are highly likely to utilise the apprentice and trainee system for entry-level training.

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Locational issues in New Apprenticeships

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Introduction

THIS NATIONAL RESEARCH and Evaluation Committee-funded study considers the geographic distribution of New Apprenticeship (i.e. apprenticeships and traineeships) commencements in relation to where young people live and where jobs are located. The term 'apprenticeships' is used throughout this chapter to include what were, and are still popularly known as, traineeships. Apprenticeships and traineeships were combined to create the New Apprenticeship system from the beginning of 1998.

The purpose of the study is to determine whether the local availability of jobs and the local supply of labour, especially young people, are factors in the rate of commencements in apprenticeships. When the New Apprenticeship program was introduced in the Federal Government's 1996 Budget program, funding was provided through the abolition, or substantial reduction, of a range of labour market programs that had been developed by the previous Federal Government, largely under their 'Working Nation' initiatives. While it is clear from the National Centre for Vocational Education Research (NCVER) statistics that the objective of increasing training opportunities through structured training has been met, mainly through substantial increases in what were traineeships, there are issues related to the employment-based nature of New Apprenticeships that warrant investigation.

The labour market programs, whose abolition funded the New Apprenticeship initiatives, were targeted primarily at individual unemployed persons. As a result, program funding tended to be greater in geographic areas of higher unemployment where there were fewer employment opportunities. The central purpose, then, of this study was to determine whether the introduction of New Apprenticeships, which require the existence of employment as a pre-condition, has led to inequitable access for those located in areas of relatively high unemployment and relatively limited local employment opportunities.

Another important issue that had been raised by some employers and by the Federal Government was that demand for new apprentices could not always be met. This was occurring when there were indications of continuing high rates of unemployment among young people. One national indicator of the mismatch in labour supply and demand among young people might be that in November 1998, there were about 81 600 unemployed in Australia aged 15–19 who were not still at school. The study hypothesised that geographical mismatches in supply and demand could partly explain this apparent market failure.

This study analyses NCVER data on New Apprenticeship commencement trends for the period 1995–96 to 1998–99 by location (on a national basis) and compares this distribution with the distribution of both unemployed 15–24-year-olds (using Australian Bureau of Statistics [ABS] Labour Force Survey data) and with total employment (using the ABS Integrated Register of Businesses).

Apprenticeship and traineeship statistics for the three financial years preceding 1998–99 are examined to demonstrate differences in the development of the system between the States and Territories over recent years. Commencements in New Apprenticeships are compared with ABS data from the Monthly Labour Force Survey for unemployed by broad age groups. Data from the ABS Integrated Register of Businesses and the 1996 Census are also analysed to show the geographical distribution of employment and unemployment by statistical division by industry division.

The study has also involved discussions with officers of State training agencies, group training companies, industry training advisory bodies, Area Consultative Committees, industry bodies and some key employers.

State/Territory differences in commencements

Recent trends by State/Territory

Between 1995–96 and 1998–99 the number of apprenticeship commencements in Australia (that is, apprenticeships and traineeships combined) grew very strongly, almost trebling in number over that short period. In 1995–96 almost 65 000 persons began an apprenticeship. By 1998–99 this number had grown to more than 189 000.

This growth was not, however, distributed uniformly at the State/Territory level, as shown in table 1. Percentage growth over the period varied between more than 300% in Tasmania to just 33% in the Northern Territory and 62% in New South Wales. Queensland and South Australia recorded growth of more than 200%, and Victoria about 180%, while Western Australia was closer to New South Wales, with growth of about 80%.

Table 1: Apprenticeship commencements by jurisdiction, 1995–96 to 1998–99

	1995–96	1996–97	1997–98	1998–99	% growth 1996–99
New South Wales	23 653	26 101	30 236	38 236	61.65
Victoria	18 873	24 429	28 528	52 831	179.93
Queensland	16 255	22 750	36 887	50 466	210.46
South Australia	5 460	6 843	11 119	20 002	266.34
Western Australia	6 572	8 983	10 886	11 769	79.08
Tasmania	2 443	2 768	3 602	10 438	327.26
Northern Territory	1 254	1 589	1 778	1 673	33.41
Australian Capital Territory	1 668	1 923	2 123	4 202	151.92

Source: NCVER

One implication of the uneven growth in commencements across Australia has been that there is now, at the State/Territory level, marked variation in the ratio of commencements to the youth population, as summarised in table 2. It shows that New South Wales and Western Australia, and to a lesser extent the Northern Territory, recorded lower proportions of commencements in relation to their share of the 15–24-year-old population than other areas of Australia.

Table 2: Distribution of apprenticeship commencements and 15–24-year-old population, by State/Territory, 1998–99

	Apprenticeship commencements %	15–24-year-old population %
New South Wales	20.16	32.32
Victoria	27.86	24.35
Queensland	26.61	20.63
South Australia	10.55	7.36
Western Australia	6.21	10.04
Tasmania	5.50	2.39
Northern Territory	0.88	1.11
Australian Capital Territory	2.22	1.81

Source: NCVER and ABS Labour Force Survey

Trends by occupation of apprenticeship

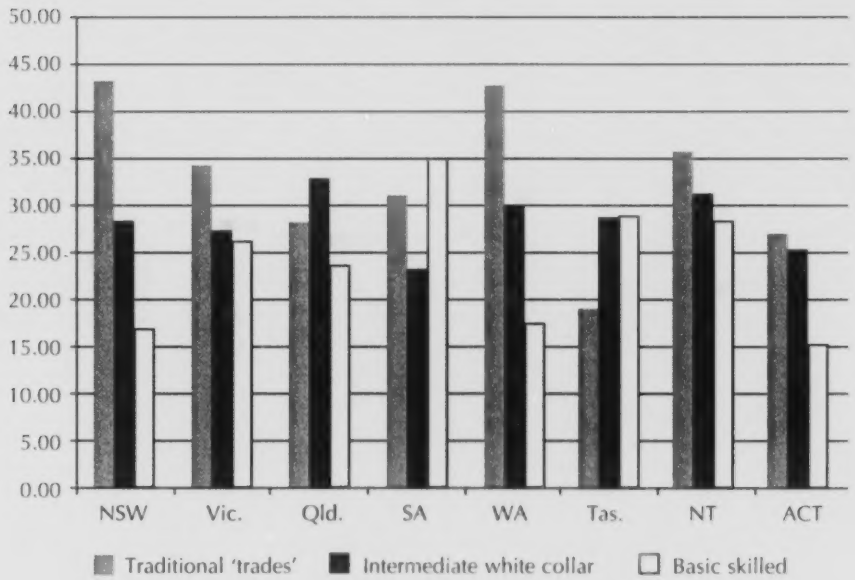
Growth in commencements over the period was not distributed uniformly on an occupational basis. Most of the growth, nearly 60%, occurred in intermediate and elementary level clerical, sales and service occupations. This result is not surprising and reflects both the changing composition of the Australian labour market and the successful policy outcome of extending structured training to a wider section of the Australian work force.

Occupational data in this study was examined at the Australian Standard Classification of Occupations (ASCO) minor occupational group level. When

analysed at this level, the composition of apprenticeship commencements is concentrated in a relatively narrow range of largely gender-segmented occupational areas.

Over 85% of commencements occurred in 13 of these 35 occupational groups. Females made up less than 2% of commencements in the four most numerous 'traditional' trade areas (mechanical/fabrication, automotive, electrical and construction). In the three largest categories, elementary sales occupations, intermediate clerical occupations and intermediate service occupations, females made up about 60%, 83% and 76% respectively of commencements. Using the 13 occupational groups[1] that make up 85% of national commencements and then grouping them into three broad categories—'traditional trades', 'intermediate white collar' and 'basic skilled'—the following pattern emerges by jurisdiction.

Figure 1: Occupational category of apprenticeships by jurisdiction, commencements in 1998–99



The high number of commencements in South Australia, Tasmania, Queensland and Victoria compared to New South Wales and Western Australia appears to be partly related to growth in apprenticeship commencements outside the traditional trade areas.

It is clear that in those jurisdictions (Tasmania, South Australia, Queensland and Victoria) that have shown rapid growth in apprenticeship numbers in recent years a relatively higher proportion of commencements are in the basic-skilled occupations (especially ASCO groups 82, 91, 92 and 99). On the other

hand, the States that have shown lower growth rates—New South Wales and Western Australia, along with the Australian Capital Territory to some degree—have very similar occupational profiles among their apprenticeship commencements, with fewer than 20% of their commencements in the basic-skilled occupations. In both these States, the traditional skilled trades still represent the largest of these three categories.

When growth patterns by State/Territory are examined using this grouping into three broad categories, it is apparent that high growth in apprenticeship commencements has not been achieved in some States simply by concentrating on more lowly skilled apprenticeships. Over the last four years, growth in apprenticeship commencements in the traditional trades occupations has been stronger in the high growth States of Victoria and Queensland than in New South Wales, where overall growth has been lower.

Moreover, growth in New South Wales over that period in the intermediate white-collar occupations (intermediate clerical, sales and service occupations) was static, whereas all other States recorded significant growth in this area. As with the other States, New South Wales recorded strong growth in the 'basic skilled' category (elementary sales occupations, cleaners, factory labourers and trades assistants). Western Australia was similar to New South Wales, although Western Australia recorded strong growth in intermediate white-collar apprenticeships.

Trends in duration by occupational group

One final observation needs to be made in relation to commencements by occupation. Using the above occupational grouping, the expected duration of training patterns varies markedly between the jurisdictions. Although most (about 73%) of the commencements in the 'traditional' trades area had an expected duration of at least three years, it is clear that even in this area the traditional notion of 'skilled' trades training involving at least three years' study is no longer universal. Several industry-based contacts suggested that a shortened period of trade training might indicate the development of greater flexibility in delivery arrangements and a greater use of recognition of prior learning mechanisms. Table 3 shows the percentage of traditional trades (ASCO minor groups 41–45 & 49) by jurisdiction that had an expected duration of the standard 3–4 years.

On the other hand, about 10% of the commencements in the least skilled occupations (ASCO 81–99) had an expected duration of more than two years. This might, in part, be attributable to part-time apprenticeships. Oddly, only about 7% of commencements in the intermediate white-collar occupations (ASCO minor groups 61–63) had an expected duration of greater than two years, suggesting perhaps that part-time apprenticeships are less likely in this group of occupations. Almost 82% of such commencements had an expected duration of less than one year, although on a State/Territory basis this percentage varied widely between 68% in the Northern Territory to 90% in New South Wales and South Australia.

Table 3: Expected duration of traditional trades apprenticeships by jurisdiction, 1998–99 commencements

Jurisdiction	Percentage of trades apprenticeships with expected duration of 3–4 years
New South Wales	89
Victoria	69
Queensland	57
South Australia	82
Western Australia	67
Tasmania	65
Northern Territory	43
Australian Capital Territory	87

Source: NCVER

Growth also varied between and within the States and Territories on a number of other dimensions, including part-time/full-time apprenticeships, expected duration of the apprenticeship and the Australian Qualifications Framework (AQF) level of the apprenticeship. While this study focusses on geographical differences in the supply of, and demand for, apprentices, these other variations are important in understanding the factors that have contributed to variations in growth on a geographical basis.

Apprenticeship commencements by AQF level

In all States and Territories other than South Australia, the majority of commencements (at least 55%) in 1998–99 were at the AQF 3 level. In South Australia, AQF level 3 commencements represented just over 40% of total commencements in that year. The profiles of the three largest States and the Australian Capital Territory are quite similar. Tasmania is prominent in having a relatively high proportion of commencements at the AQF 4 level (although numerically Queensland had the greatest number of commencements at this level).

Table 4: Apprenticeship commencements by AQF level, 1998–99

	AQF1%	AQF2%	AQF3%	AQF4%	AQF Dip+%	Unknown %
New South Wales	0.00	39.78	57.75	2.31	0.15	0.02
Victoria	0.01	31.60	65.07	3.29	0.04	0.00
Queensland	0.15	33.27	59.98	6.44	0.16	0.00
South Australia	0.10	54.19	40.76	2.45	0.00	2.49
Western Australia	0.88	37.81	60.80	0.48	0.00	0.03
Tasmania	0.16	21.63	61.64	16.56	0.00	0.00
Northern Territory	1.97	40.59	55.53	1.91	0.00	0.00
Australian Capital Territory	0.00	27.89	69.18	2.93	0.00	0.00

Source: NCVER

Full-time and part-time apprenticeships

The expected duration of apprenticeships is not only determined by the occupation and required skill level of the apprenticeship. A significant proportion of apprenticeship commencements in 1998–99, over 16% nationally, were part time. In 1995–96, only just over 2% of commencements were known to be in part-time apprenticeships. In 1998–99, more than 25% of female apprenticeship commencements were part time, while only 9.2% of male commencements were part time.

The incidence of part-time apprenticeships varies substantially between the jurisdictions from about 3.5% in the Northern Territory to more than 21% in Victoria.

Table 5: Full-time and part-time apprenticeship commencements, 1998–99, by jurisdiction

	Part time	Full time	Total	% part time
New South Wales	3 627	34 609	38 236	9.5
Victoria	11 367	41 464	52 831	21.5
Queensland	9 726	40 740	50 466	19.3
South Australia	1 448	18 553	20 001	7.2
Western Australia	1 962	9 807	11 769	16.7
Tasmania	1 912	8 526	10 438	18.3
Northern Territory	58	1 615	1 673	3.5
Australian Capital Territory	774	3 428	4 202	18.4

Source: NCVER

The patterns revealed in table 5 again show that the New Apprenticeships system is being implemented differently in the eight Australian jurisdictions. South Australia recorded the second lowest incidence of part-time apprenticeships, while its growth for all apprenticeships has been the second highest nationally over the last four years. In Western Australia, a moderately high proportion of part-time apprenticeships was recorded, despite that State showing an overall relatively low rate of growth in apprenticeship commencements.

The incidence of part-time apprenticeships does not seem to vary significantly between metropolitan and non-metropolitan areas. The variation between males and females in the incidence of part-time apprenticeships has the potential to perpetuate occupationally based gender segregation—a persistent shortcoming of traditional apprenticeships.

Labour market variations across Australia

During 1998–99, there were, on average, about 270 000 persons aged 15–24 who were recorded as unemployed by the ABS Labour Force Survey. ABS Labour

Force data (ABS May 1999 6203.0) shows that in May 1999 there were 87 900 young persons aged 15–19 who were unemployed and not attending school. Other ABS data (ABS 1998 No. 6227.0) show that in May 1998 there were in Australia 39 200 persons aged 15–19 and 87 700 aged 20–24 neither employed (neither full time nor part time) nor attending any recognised study, representing nearly 5% of the population aged 15–24.

Youth unemployment is not distributed evenly across Australia by State/Territory. One way of demonstrating the variations in youth employment opportunities across Australia is to examine the ratio of youth employment to unemployment. (Using such a ratio overcomes some of the difficulties associated with using raw unemployment rates. Nevertheless, 15–19-year-old unemployment rates generally follow the same patterns as the figures shown in table 6.) Table 6 shows 15–24-year-old unemployed as a percentage of total employment of 15–24-year-olds by State/Territory.

Table 6: Unemployed as percentage of employed, year averages 1998–99, 15–24-year-olds, by State/Territory

State/Territory	15–24-year-old unemployed as % of 15–24-year-old employed
New South Wales	14.7
Victoria	16.7
Queensland	19.1
South Australia	21.8
Western Australia	15.4
Tasmania	24.9
Northern Territory	9.7
Australian Capital Territory	16.6
Australia	**16.9**

Source: ABS Labour Force Survey

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Table 6 shows that employment opportunities for young people appear to be relatively stronger in New South Wales, Western Australia and the Northern Territory, where the percentages are low. The worst labour markets for young people appear to be in Tasmania and South Australia.

About 70% of all the jobs in Australia are located in the nation's eight metropolitan areas of Sydney, Melbourne, Brisbane, Adelaide, Perth, Hobart, Darwin and Canberra. Less than 64% of the nation's population, however, lives in these metropolitan areas, indicating an imbalance between the distribution of employment opportunities and workers and potential workers within, as well as between, States.

Apprenticeships and the labour market

As well as the labour market differences between the States and Territories discussed above, variations in growth rates in apprenticeship commencements

have contributed to apparent differences in access to apprenticeships between and within States and Territories. A number of ratios are examined in this chapter, comparing apprenticeship commencements to the 15–24-year-old population, the 15–24-year-old unemployment rate, and total employment by the location of jobs. All these ratios indicate substantial differences between regions across Australia in the local availability of apprenticeship opportunities.

Commencements and total employment

One useful indicator is the ratio of apprenticeship commencements to total employment. In this case, total employment is as shown in the ABS Integrated Register of Businesses. This collection shows the physical location of employment—that is, where the job was located. This distinguishes it from data collected in the ABS Labour Force Survey that show the residential location of the employed work force.

Across Australia there is, on average, one apprenticeship commencement for every 38 jobs. The smallest number of apprenticeship commencements relative to total employment in 1998–99 occurred in Sydney and Perth, two of the strongest labour markets in Australia.

Table 7 shows the ratio of apprenticeship commencements to total employment from the ABS Integrated Register of Businesses for all the metropolitan and non-metropolitan areas of Australia. The table shows that there are about 78 jobs for each apprenticeship in Sydney, but in non-metropolitan Tasmania only 14 jobs for every apprenticeship.

Table 7: Apprenticeship commencements to jobs ratio, by State/Territory

State/Territory	Ratio of total jobs to apprenticeship commencements, 1998–99	
	Metropolitan	Non-metropolitan
New South Wales	78:1	44:1
Victoria	41:1	24:1
Queensland	31:1	21:1
South Australia	31:1	18:1
Western Australia	71:1	50:1
Tasmania	34:1	14:1
Northern Territory	51:1	38:1
Australian Capital Territory	29:1	na

Sources: NCVER and ABS Integrated Register of Businesses

The variations revealed in table 7 are substantial. It is clear that there is no consistent approach to apprenticeship creation on a broad geographical basis. The low rate of commencements to employment in Sydney and Perth suggests that in stronger labour markets training wages and a lesser supply of applicants might act as deterrents to apprenticeship creation. The gap between

metropolitan and non-metropolitan areas in each State is also likely to be a reflection of these labour market differences. While different industry composition could be responsible for some of the variation between metropolitan and non-metropolitan areas, it is unlikely that compositional differences would explain the variations between capital cities.

Commencements and the 15–24-year-old population

An analysis has been undertaken of the distribution of apprenticeship commencements compared with the 15–24-year-old population by the ABS's 'labour market regions'. These regions are generally aggregations of statistical divisions and are used in the ABS Monthly Labour Force Survey.

The apprentices: population ratio shows both marked differences between metropolitan and non-metropolitan regions as well as substantial differences between States. Table 8 shows the ratios for each major metropolitan area, together with each area's 15–24-year-old unemployment rate. Data are not available for the two Territories. The data show that in Sydney there was one apprenticeship commencement for every 26 young persons aged 15–24, whereas in Hobart there was one commencement for every eight young persons.

Table 8: Apprenticeship commencements to 15–24-year-old population ratios and unemployment rates, capital cities

City	Apprentices: 15–24-year-old population ratio	15–24-year-old unemployment rate, May 1999,%
Sydney	1:26	9.73
Melbourne	1:14	13.14
Brisbane	1:12	18.99
Adelaide	1:10	18.20
Perth	1:27	13.01
Hobart	1:08	18.69

It is apparent that the two areas with the lowest unemployment rates—Sydney and Perth—also recorded the lowest rate of apprenticeship commencements relative to the 15–24-year-old population. The conclusion seems to be that apprenticeships are either less popular or less likely to be established in areas where job prospects in general are stronger.

It is clear that, as far as metropolitan areas are concerned, there are two distinct groups of States. New South Wales and Western Australia both recorded low apprenticeship commencements while the other States recorded high numbers of commencements, relative to the 15–24-year-old population. These outcomes support the thesis that apprenticeship commencements are relatively less frequent in stronger labour markets. The dimension of the differences, however, also suggests that different policies or practices are being used in the

administration of New Apprenticeships in the two groups of States and Territories.

Sydney and Perth recorded the lowest 15–24-year-old unemployment rates and, thus, relatively fewer young people are likely to be available in those cities for apprenticeship vacancies, especially in the central business districts (CBDs) of those cities. Nevertheless, Melbourne's unemployment rate was little different from Perth's, yet Melbourne saw one in 14 of its 15–24-year-old population commencing an apprenticeship in 1998–99 compared with only one in 27 in Perth.

Apprenticeships within metropolitan regions

Some of the most important variations in the ratio of apprenticeship commencements to total employment occur within the major metropolitan areas. The following section provides an overview of the main metropolitan areas in Australia, showing how widely apprenticeship creation varies across these areas.

Table 9 shows the wide range of ratios that exist in selected areas across Australia in this ratio.

Table 9: Total employment to apprenticeship commencements, selected areas, 1998–99

Area	Total number of jobs for every apprenticeship commencement, 1998–99
Central Perth	455
Inner Sydney	325
Inner Melbourne	187
Whole of Australia	38
Northern Adelaide	18
Rural Tasmania	14

Sydney

Areas of Sydney showing the greatest ratios of apprentices to employed persons were Outer South-Western Sydney (1: 27), Outer Western Sydney (1: 34) and Blacktown-Baulkham Hills (1: 37). The lowest ratios were evident in Inner Sydney (1: 325), Lower Northern Sydney (1: 244) and Inner Western Sydney (1: 109).

In an analysis of the Sydney region undertaken by the National Institute of Economic and Industry Research (NIEIR 1999) for the GROW Employment Council (the Sydney Area Consultative Council), the NIEIR described Sydney as being comprised of two elements, 'Global Sydney' and the 'second city'. The Global Sydney comprised the northern, central and 'gentrifying' inner city (those areas where apprenticeship commencements were most uncommon). The

second city comprised the 'production corridor' of mid-western and south-western Sydney, generally those areas where apprenticeship commencements were more likely to occur.

The implication is that growing, globally oriented businesses in the knowledge-intensive new industries, based predominantly in the Inner Sydney and Lower Northern Sydney labour market regions, are simply not participating in the existing structured training system. Young people in the Global Sydney half of Sydney comprised about 36% of Sydney's 15–24-year-old population but only 27% of Sydney's apprenticeship commencements.

So, while industries in this part of Sydney are much less likely to hire apprentices, so, too, are young people resident there less likely to enter an apprenticeship, despite this area having perhaps the strongest labour market in Australia.

Melbourne

The outer regions of Melton–Wyndham, South Eastern Outer Melbourne and Yarra Ranges Shire Part A all showed very high ratios, with between one in 12 and one in 14 apprenticeship commencements per local job. As was the pattern in Sydney, these areas show a mix of manufacturing and retail trade as the main industries. Again following the pattern in Sydney, the lowest ratios of apprentices to employed occurred in Inner Melbourne (1: 187), along with the adjoining Boroondara City (1: 86), both showing high employment in the property and business services industry, the major growth sector in the new economy.

Following a similar pattern to Sydney, the inner parts of Melbourne (Inner Melbourne, Eastern Middle Melbourne, Boroondara City and Southern Melbourne) contained 35% of the Melbourne metropolitan 15–24-year-old population but represented only 28% of apprenticeship commencements.

Brisbane

Of all capital cities, Brisbane and regional areas show the highest ratios of apprenticeship commencements to employed persons. That part of Beaudesert Shire located within the Brisbane Statistical Division (Part A—about 52% of the shire's employed labour force), which is dominated by employment in the construction industry, showed the highest rate of one commencement to every second person employed (1: 2.3). Brisbane City itself showed a ratio of 1: 50, with property and business services, retail trade and health and community services being the main industries.

Brisbane City contained 59% of the metropolitan area's 15–24-year-old population but represented only 48% of apprenticeship commencements. Again this is a pattern similar to Sydney and Melbourne.

Adelaide

The outlying Northern and Southern Adelaide regions showed ratios of one apprenticeship commencement to every 18 local jobs, with a mix of manufacturing and retail trade employment predominating in those regions. Eastern Adelaide, which includes Adelaide CBD, followed the pattern observed in Sydney and Melbourne, with a low rate of commencements of 1: 83. It also reflected the same industry predominance of property/business services as inner metropolitan areas of other capital cities.

Eastern Adelaide also followed the pattern of other metropolitan areas in representing 22% of the 15–24-year-old population but providing only 14% of apprenticeship commencements.

Perth

Perth recorded the lowest take-up of apprenticeships compared to other capital cities, with the highest rates being in Northern (1: 41) and Eastern (1: 44) Perth. These areas have a mix of industries, with retail trade and property/business services leading in the North, while wholesale trade and mining predominate in the East. Central Perth shows a very low 1: 455 ratio of apprenticeship commencements to total jobs, the lowest ratio in Australia, with property/business services being the main industry in that region.

The structure of the sub-divisions in Perth makes an analysis on the basis of 'inner' versus 'outer' regions difficult as the South-Eastern Metropolitan sub-division embraces inner and outer areas. Nevertheless, the Central Perth region follows the pattern of the other States' metropolitan areas in having 9% of the 15–24-year-old population but only 5% of the apprenticeship commencements.

Discussion and policy implications

Discussion

Total apprenticeship commencements in Australia have grown strongly over the last four years, largely through the growth of apprenticeships of less than one year's duration. This increase in commencements has not been evenly distributed across Australia. Tasmania, South Australia, Queensland and Victoria all recorded well above average growth, while New South Wales and Western Australia recorded well below average growth.

Apprenticeship commencements in Australia in 1998–99 were distributed very unevenly on a geographic basis. Using the indicator of apprenticeship commencements to total employment there are both substantial differences between States and Territories and between smaller geographic units within States and Territories. Reasons for these variations seem to be related to both labour market differences and policy differences. The labour market differences are more apparent at the level of smaller geographical units.

While the labour market and employment data used in this project have some limitations at the level of smaller geographical units, nevertheless, the researchers believe that the regional differences described in this chapter are substantial and significant in policy terms.

Policy differences appear to have caused some degree of variation in the growth of New Apprenticeships between the States and Territories. As a general observation, it appears that New Apprenticeships are achieving a poor market penetration in areas where the labour market, especially for young people, is strong.

One irony, noted by Queensland (DETIR 2000) in its submission to the Senate Committee Inquiry into the quality of vocational education and training in Australia, is that the apprenticeship system, largely through policy differences, now varies more across the States and Territories than it did before the introduction of New Apprenticeships. One important policy difference has been in relation to existing worker traineeships (that is, converting existing employees into apprentices or trainees).

In terms of labour market differences, across Australia in 1998–99 there was, on average, one apprenticeship commencement for every 38 jobs[2]. Sydney and Perth recorded the lowest ratios of apprenticeship commencements to total jobs. In both those metropolitan areas there was only about one apprenticeship commencement for every 70+ jobs. In most of the other main metropolitan areas, there was one apprenticeship commencement for about every 30–40 jobs. Even more marked variations occurred within some metropolitan areas.

In non-metropolitan areas, commencements to jobs ratios were higher than in metropolitan areas, with rural Tasmania recording one commencement for about every 14 jobs. The non-metropolitan areas of New South Wales and Western Australia recorded lower commencements: jobs ratios than the other jurisdictions.

At the State/Territory level, the findings do not necessarily support the initial proposition that the introduction of New Apprenticeships might favour those regions where jobs are more plentiful. Using another ratio, commencements to 15–24-year-old unemployed, those States with the strongest labour markets in 1998–99—New South Wales and Western Australia—recorded the lowest ratios of commencements to young unemployed. In other words, in stronger labour markets, young unemployed people appear less likely to enter an apprenticeship. Conversely, those States with the weakest labour markets for young people—Tasmania and South Australia—recorded strong growth in apprenticeship commencements. Moreover, in New South Wales and Western Australia, it appears that a lower proportion of unemployed young people are 'converted' into apprentices. One reason for this might be that in those stronger labour markets, the more marginalised unemployed young people are relatively less likely to have the educational and personal attributes sought by the employers of apprentices.

When examined at the statistical sub-division (SSD) level, the picture becomes even starker. Within New South Wales and Western Australia, the labour markets within Sydney and Perth are generally stronger than elsewhere in the State. Within the Sydney metropolitan area, there is a pronounced division between roughly the eastern and western halves. The eastern half, which includes the CBD, experiences very low unemployment rates and has an industry structure that is characterised (NIEIR 1999) as 'global'. During 1998–99, within the Inner Sydney SSD (the CBD and surrounds), there was only one apprenticeship commencement for every 325 local jobs—nearly one-ninth of the Australian average. Central Perth recorded an even poorer outcome, with one apprenticeship commencement to every 455 jobs—about one-twelfth of the national average. The dominant employment sector within both these CBDs is the fast-growing property and business services industry within which many of the 'new economy' enterprises are located.

Within metropolitan areas across Australia, there was generally a geographical mismatch between the location of jobs and the residential location of the young unemployed. In Sydney, the divide is generally an east/west split, while in the other large metropolitan areas the picture is generally one of jobs being concentrated in inner regions and young unemployed in outlying regions. Policies aimed at assisting travel to work within metropolitan areas and in assisting young people from non-metropolitan areas finding accommodation in metropolitan areas might assist in filling unfilled vacancies for apprentices in metropolitan regions. Discussions with industry experts, however, suggest that more intractable problems might exist.

There is some evidence that the rapid growth in numbers in some jurisdictions might be associated with a loss in training quality (e.g. Schofield 1999a). Several industry contacts cited known examples of poor quality of supervision of training and the exploitation of apprentices. The examples quoted were referred to as traineeships by all the contacts. They instanced apprentices being required to work unpaid hours and some, in wholly on-the-job apprenticeships, receiving inadequate instruction. In labour markets such as Sydney and Perth, where more job options exist, positions offering training wages and sometimes dubious quality training will clearly be more difficult to fill.

In her review of traineeships in Tasmania Schofield notes:

> *There is also some customer concern, revealed in the consultations, that traditional traineeships (and apprenticeships) are no longer valued in the way they once were and that a good deal of training delivery is inappropriate.*
>
> (Schofield 1999b)

Moreover, many industry contacts noted that an outdated image of apprenticeships still exists. They believe that inadequate information is provided to young people about the nature of employment as an apprentice. One contact noted that many parents, teachers and careers advisers still regard

the typical workplace of an apprentice as a 'dark, satanic mill'. It would be reasonable to expect these impressions to be held most typically in regions where a family history of involvement in apprenticeships was less likely. Marshman (1998) found that many employers in manufacturing were unable to recruit apprentices, partly through the poor image the industry has for job stability and working conditions. Marshman advocated specific marketing campaigns directed at the media, teachers, students and individual employers to improve the image of manufacturing and facilitate their recruitment of apprentices.

While there is some evidence that a lack of quality and a lower income might deter some young people from entering apprenticeships, it is also clear that many employers, including group training companies, believe many applicants for apprenticeship positions lack adequate vocational preparation and a positive attitude to further workplace learning. Research by several Commonwealth agencies (DEWRSB 1998; DEETYA 1998) indicated that only about one in four applicants for apprenticeship positions was judged suitable by the employer. The DEETYA study in Victoria also found greater recruitment difficulties in Melbourne than elsewhere in the State. Nevertheless, these studies found that most apprenticeship vacancies were filled successfully.

Outside metropolitan areas, few contacts reported difficulties in recruiting apprentices, with some identifying a lack of demand from employers as the main barrier to further expansion of the program. This analysis has identified some specific regions of Australia where there appears to be both an unusually low level of apprenticeship commencements and a relatively high rate of unemployment among the 15–24-year-old age group. These are areas where specific regional initiatives might be targeted towards employers to increase equitable access to apprenticeships on a regional basis.

Five regions across Australia were identified as having both relatively low per capita apprenticeship commencements and an apparently plentiful supply of young unemployed. These areas were Barwon-Western District in Victoria, Richmond–Tweed & Mid North Coast of New South Wales, the Hunter region around Newcastle in New South Wales, the Perth metropolitan area and the Lower Western in Western Australia. These areas appear prime targets for specific regional initiatives in New Apprenticeships.

Two other regions, Darling Downs/South-West Queensland and Illawarra/South Eastern New South Wales, appear to be regions that, despite having relatively high apprenticeship commencements, also have remaining substantial pools of young unemployed and could also be suitable areas for specific targeting.

Policy options

Given the problems identified in regard to quality (Schofield 1999a), it is not clear that simply aiming to increase apprentice numbers of itself is a desirable

aim. It is, however, clear that there are geographical regions where apprenticeship opportunities are scarce and there is likely to be a ready supply of suitable applicants.

It is also clear that in some metropolitan regions, especially the CBDs of Sydney and Perth, apprenticeships are only being established in very small numbers relative to total employment in those areas. Of concern is that the businesses found in these areas are more likely to be in the expanding 'new economy' activities of information technology and communications, and other business services. These are sectors where skill shortages are already apparent and are obviously sectors that are likely to offer future prospects. Hence, while there is no industry analysis of apprenticeship commencements undertaken in this study (because of shortcomings in the apprenticeship data collection), it appears likely that industry differences in apprenticeship generation are significant and need to be addressed.

While apprenticeship commencements appear to be more supply driven than demand driven, there are parts of the metropolitan areas where young people are much less likely to commence an apprenticeship. These appear to be areas of higher educational attainment and higher socio-economic status, and they tend to be areas where labour markets are strongest and 'new economy' industries are emerging.

It seems likely that one factor that mitigates against apprenticeship commencements in these regions is the popular image associated with the word 'apprenticeship'—that is, one of dirty jobs in often unpleasant working conditions. While this is far from the reality, the image, according to industry contacts, is widely held. Marketing of New Apprenticeships needs to reinforce the message that, in the words of one brochure (Manufacturing Learning Australia, undated), 'the hard labour has been engineered out of modern workplaces'.

From this analysis there would appear to be at least three areas where policy initiatives should be considered.

- *Specific regional initiatives in areas where demand for apprentices is particularly low* relative to the local youth population and where youth unemployment levels are relatively high. This might involve specific support for group training companies and area consultative committees operating in these regions, relocation and accommodation support for young residents of these areas, or additional financial support for employers. Policy initiatives along these lines could form part of the existing Regional Assistance Program. In 1999–2000, $40.8 million was provided in the Federal Budget under this program which in part is aimed at 'generating employment, creating small business opportunities and building the skills base of regions' (Anderson 1999).

This approach is supported by the Senate Committee inquiry into regional employment as quoted by the Queensland Chamber of Commerce and Industry (QCCI 2000). It noted (p.14) that:

Whereas once many businesses had a sense of social or community responsibility to train apprentices, that is now being overshadowed by the national competition policy and increasing pressures to be globally competitive.

(SEWRSBERC 1999, 5.76)

The committee went on to propose that:
in regions of high unemployment where there are, or will be, skills shortages, priority funding could be given to vocational training to expose young people to occupations in demand and to give them some grounding and experience in those occupations . . . (S)uch an approach will also be beneficial in encouraging young people to remain in regional localities rather than heading to the city to find employment. The Commonwealth should seek to facilitate these local initiatives wherever possible. (QCCI 2000, p.14)

Given that apprenticeship commencements with government employers have declined more sharply than in other sectors, it might be worth considering ways in which government could, in some instances, act as a direct employer of apprentices in those areas identified as particularly disadvantaged in the provision of apprenticeship opportunities.

- *Initiatives targeted at emerging 'new economy' industries in metropolitan CBDs* that do not appear to be involved significantly in the apprenticeship system. For policies to be effective in this area, related initiatives would be required both to encourage young people in middle-class areas to enter apprenticeships in these areas and, also, initiatives to encourage young people from outside these regions to take up any ensuing opportunities. Fundamental to this would be promotional programs aimed at dispelling the widespread misconceptions about the nature of apprenticeships and the career options that follow.

Equally important, however, would be programs to ensure that quality training is being universally delivered and that apprentices are treated fairly in the workplace. On the other side of the ledger, it also seems clear that many young people lack adequate educational preparation for apprenticeships. This study has not examined this issue in detail and makes no recommendations on it. It does, however, appear that further specific research into this issue is warranted.

- *Marketing initiatives* aimed at depicting the nature of working conditions in New Apprenticeships, highlighting the changed nature of the working environment for most New Apprentices. Such a campaign would logically be targeted at metropolitan regions where constraints on the supply of potential apprentices are most apparent.

Notes

1 The groups are defined as follows: 'Traditional trades' are ASCO minor groups 41 (Metal trades), 42 (Automotive trades), 43 (Electrical trades), 44 (Building trades), 45 (Food trades) & 49 (Other, incl. hairdressing, printing); 'Intermediate white collar' are ASCO 61 (Intermediate clerical), 62 (Intermediate sales) & 63 (Intermediate service); 'Basic skilled' are ASCO 82 (Elementary sales), 91 (Cleaners), 92 (Factory labourers) & 99 (Other labourers & related).

2 'Jobs' refers to the total number of persons employed and working within a specific geographical location. Data for this measure are from the ABS Integrated Register of Businesses.

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The report on which this chapter is based is published electronically on the world wide web at:
http://www.ncver.edu.au/research/proj/nr9022.pdf

Unlocking the barriers: A regional perspective of apprenticeships and traineeships

John Martino
Sue Holden

> *There is a striking parallel between the poverty experienced by many workers denied opportunities to work, but kept in the workforce, and the failure experienced by many students denied opportunities to achieve, but kept on at school. The economic system should create real chances to earn; the education system should create real chances to learn. But today the institutions through which wealth is produced plunge large numbers of workers into poverty every year, and the institutions that create academic success condemn large numbers of students to failure. Each system, it seems, sets limits on the diffusion of economic and cultural benefits so as to prevent the dilution of quality and protect a narrow social enjoyment, which amounts to the same thing.* (Teese 2000)

Introduction

THIS RESEARCH PROJECT is the first of its kind focussed on the western region of Melbourne, which sets out to identify the barriers to the uptake of apprenticeships and traineeships.

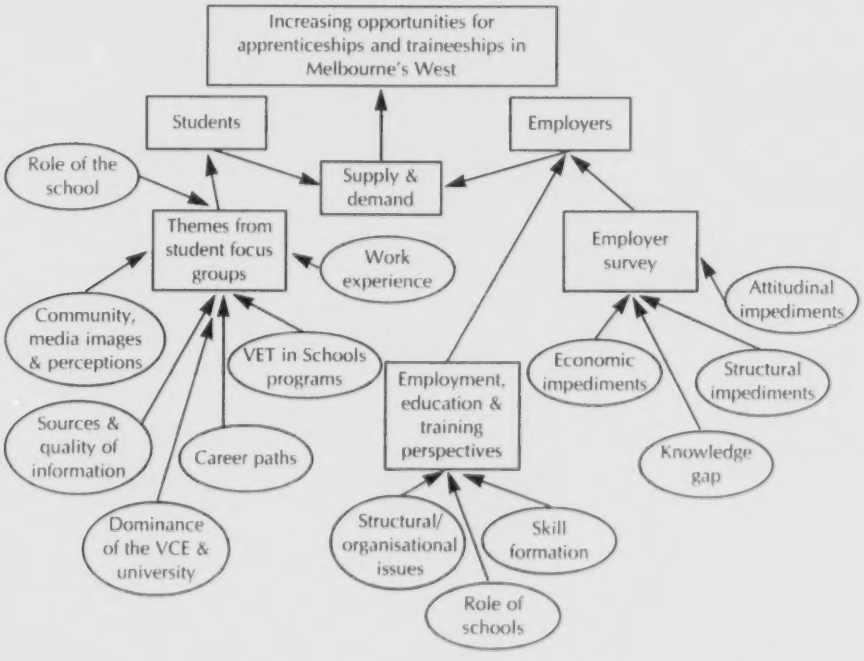
In doing so, it has taken a snapshot of current New Apprenticeship[1] activity in the western region and analysed the realities of the attitudes and practices of key players. It gives an understanding of why there are barriers to the uptake of New Apprenticeships and highlights opportunities to improve New Apprenticeship outcomes in the western region.

The report identified 15 recommendations grouped under the headings of schools, employers and government. The recommendations covered a range of areas from life-long learning for young people, developing a pathways planning model for career development to the expansion of support provided by New Apprenticeship Centres (NACs). The recommendations also called upon the Government to implement the findings of the Kirby Review (2000) to assist the creation of greater opportunities for young people. Despite having a regional focus, the research team believes the outcomes of the research project have a broader context in similar regions around the nation.

This chapter summarises the results of the research project,[2] conducted by a team of researchers from Victoria University. Although the project had as its central objective the identification of barriers to the take-up of apprenticeships/traineeships by young people in the western region of Melbourne, it has identified further issues outside the parameters of the current project and provided a framework for further research in this area. The research project utilised a combination of qualitative (focus groups and interviews) methods and quantitative (surveys) methods to identify the barriers inhibiting the widespread involvement of young people in the New Apprenticeships program. In order to identify these barriers, the research team interviewed or surveyed students, teachers, employers and representatives of organisations responsible for training delivery or co-ordination of employment of apprentices and trainees or representatives advising government agencies on specific industry training needs throughout the western region. In doing so, a number of key themes and patterns began to emerge and assisted the research team to understand the complex interrelationships underpinning the development of skill formation in youth and to identify some of the factors undermining this process.

Figure 1 illustrates the complex set of issues and themes raised by each of the groups involved in the project.

Figure 1: Key themes from the research



Following is a brief description of the western region of Melbourne and a summary of the analysis of the research outcomes clustered under the three groupings—students, employers, and employment, education and training representatives.

The research highlighted a series of supply-and-demand barriers, which the research team argues have a significant effect upon the overall acceptance of, and participation in, the apprenticeship/traineeship system by young people in the west of Melbourne.

The western region of Melbourne

Melbourne's western region, with a population of over half a million people, is one of Australia's fastest growing economic regions. In 1996, the region provided 140 807 jobs. However, 75% of the 207 722 residents with jobs were employed outside of the region.

Manufacturing is the staple industry in the western region of Melbourne.[3] There are only 1825 manufacturing businesses in the region, placing it behind retail (4737), property and business services (3887) and construction (2459) in total number of businesses for an industry sector. It is, however, the largest employer in the region.

Combined, the key industry sectors in the west have a direct bearing on the potential growth of employment in the region, if transport, warehousing and logistics businesses are included. If manufacturing is the 'staple', transport and logistics are the 'meaty' areas of new growth. The number of transport-specific companies located in the region is 1301 and growing.[4] With the completion of the Western Ring Road and the impending completion of City Link,[5] there is a noticeable increase in the number of transport and transport-related businesses moving into the region (e.g. tyre and equipment suppliers, cold storage, refrigeration, packaging and processing, freight management, heavy vehicle mechanics and calibration mechanics).

However, the take-up of apprenticeships and traineeships (in traditional and emerging industries) both in the manufacturing, transport and logistics sectors of the region is significantly low. A regional strategy developed by the National Institute of Economic and Industry Research (NIEIR) and Ratio Consultants forecasts that in the next 15 years the rate of population growth in the west of Melbourne will exceed the rate of job growth by a factor of five to one (Ratio Consultants 1995). This means that the population will increase five times to the creation of one job.

This forecast highlights that a significant effort must be made to provide the regional community with the best possible 'platform' to utilise training and learning opportunities, including Vocational Education and Training (VET) in Schools programs and apprenticeships and traineeships.

Students

The key themes identified by students included:

- role of the school
- community, media images and perceptions
- source and quality of information
- dominance of the Victorian Certificate of Education (VCE) and university
- work experience
- VET in Schools programs
- career paths

The research team selected three groups of students from six Victorian secondary schools to be interviewed in separate focus groups (180 students). The schools were located within three local government areas representing low, medium and high take-up by young people of apprenticeships. The research group selected two schools per municipality—one government and one non-government. In each school the careers teacher was asked to assist in the selection of students using the following criteria:

- VCE students—students who had chosen traditional academic subjects.
- VCE students (VET stream)—equal number of students who had chosen VET subjects.
- Year 10 students—equal numbers of males and females. The team was interested in the group's understanding of VET and the labour market before they had made subject selections.

The groups worked through a number of questions designed to highlight their understanding of apprenticeships and traineeships, reasons behind specific subject and course decisions and future ambitions.

Students in both government and non-government[6] schools identified the pivotal role of the school in the process of choosing particular subjects and charting a post-school destination. In particular, students in both government and non-government schools highlighted the importance, and in many ways the dominance, of academic studies within the VCE. University (higher education) was perceived as the desirable outcome of the senior years of secondary schooling. This rather narrow and traditional 'academic' view of the purpose of secondary schooling and anticipated post-school pathways represents what the research team described as a specific type of 'school culture'.

For the purpose of this project, the research team identifies 'school culture' as the implicit and explicit assumptions about what is worthwhile aspiring to and what should be the end goal of an individual's school education. It also encompasses what can be described as the general tenor or atmosphere of the school—do students feel safe, valued and, above all, heard? An example of how

school culture can influence career choice includes the extent to which a school seeks to actively promote as many as possible post-school destinations or whether a limited range of options is promoted. It is, in a sense, another form of the so-called 'hidden curriculum' that Michael Apple (1990) and others have discussed.

Where school culture is focussed on narrow and academic objectives we see a 'folding in' of the options available to young people. This 'folding in' of the options being canvassed by students is also reinforced by familial pressure to do well in VCE and gain a high ENTER (Equivalent National Tertiary Entrance Rank) score and a higher education place, rather than to consider apprenticeships and traineeships as a viable alternative. As a consequence, apprenticeships and traineeships were not seen as a first option in the post-school period. A view emerged in our discussions with students that attendance at university was the most desirable end product of a secondary education, regardless of the school, system or level.

As the following response illustrates, some students cannot conceive of the place an apprenticeship might hold in their life or where it might lead them.

> *Girl 1: I was thinking about doing that, but I just couldn't drop everything and just do that for months. Like it is good to get paid for learning and stuff but I couldn't just drop everything.* (School F – 15)

From the student responses, an apprenticeship is seen as a short-term experience and not as a career option. This type of response can also be interpreted as indicating that in the minds of some young people, an apprenticeship is perceived as being part of a rigid and highly complex system which leads to an uncertain future.

> *Girl 3: Like an apprenticeship will go one, two years, what happens after that? Are we back where we started from, and like if you don't like it, could you transfer, or change what you wanted to do without too many hassles?* (School F – 15)

The possibility of an apprenticeship offering a desirable post-school destination comparable to the high status of a higher education course, or being a better option than the low skill/low paid work they had already experienced, was not a consideration. In summary, apprenticeships were a low priority amongst the thinking of the focus group participants. It was something they thought they might fall back on if all else failed.

When the research team probed this issue in more depth by explicitly asking, 'If you were offered an apprenticeship would you take one?', the following rather telling responses were given:

> *Boy 6: On whether I would take an apprenticeship over uni? No, not really, because we did work experience, and the guy told me that I could do the*

apprenticeship and after eight years I would get paid the same as someone who went to uni and came in four years later. So, works out much better to go to uni. (School E – 1)

Girl 5: Yes, I think so, if I didn't get the grades to go to uni. I think anyone would take any opportunity that there is. (School E – 1)

From these statements, it is clear that these young people did not see an apprenticeship as providing a good return for the time invested in training. If they did consider signing-up for an apprenticeship/traineeship it would be only if other options were not available.

In some schools, there appears to be a concerted effort to educate students about their post-school options, both academic and vocational. In other schools, a degree of confusion or the lack of a realistic understanding of the complex processes underpinning the transition from school to work was evident. For example, as late as Year 11, some students were still unsure about what career paths were available to them and what type of post-school destination might best suit them. This degree of uncertainty reflects the existence of a significant mismatch between when and how students are exposed to career information and advice. The origin and quality of information loomed large as an issue in the comments made by students. *Ad hoc* and informal sources of information appear to play as important a part in career choice as the formal structures and processes associated with school-based careers counselling.

Students highlighted the pivotal role they perceived careers teachers played in the process of selecting VCE subjects and post-school destinations. This suggests that when careers counselling by teachers is done effectively, students feel well placed to make realistic career choices. Students spoke highly of school-organised work experience programs as a worthwhile source of practical information about potential careers. Students described work experience as a useful mechanism with which to dispel misconceptions about the reality of particular careers and the placement provided an invaluable source of hands-on experience in the workplace.

On the other hand, when asked to comment on the delivery of VET in Schools programs, some students were critical of the manner in which their individual schools managed this. They specifically referred to examples of poor delivery and the inadequate provision of staffing, resources and information. Students were highly critical of the knowledge base of teachers delivering VET in School subjects and, in particular, felt this did not adequately prepare them for a vocational pathway.

Students discussed their views on community and media images and perceptions of apprenticeships/traineeships. Some students felt under pressure from community and family expectations to succeed in school. Students from non-government schools spoke about pressure being exerted from home to do well in Year 12 and to undertake a university course. On the other hand,

government school students did not appear to be under the same kinds of pressures and exhibited a disenchantment and lack of engagement to schooling in general and, in particular, to post-school destinations.

An unexpected issue, which emerged from this research project, was the apparent negative impact on students of the State Government-sponsored WorkCover television advertisements. The television advertisements featured a series of vignettes focussing on how unsafe work practices can lead to accidents. At least two of the advertisements depicted young apprentices as the victims of either poor workplace practices or bastardisation by co-workers. Conversely, students identified the army's 'The Edge' campaign as painting a positive and even exciting image of what constitutes an apprenticeship or a technical job in the armed forces. It should be noted that both advertisements did have quite distinct target groups. WorkCover had been targeting employers in an effort to raise awareness about the dangers of an unsafe work environment, and the armed forces were targeting young people in a recruitment drive.

Employers

The key themes identified by employers included:

- economic impediments
- structural impediments
- attitudinal impediments
- knowledge gap

The research team selected a random sample of employers to survey from the database of Western Melbourne Region Economic Development Organisation (WREDO). WREDO is the peak business and local government forum in the western suburbs of Melbourne.

The survey identified a series of structural and economic impediments to the employment of young people through the New Apprenticeship scheme. The largest industry sectors in the western region—such as building and construction, manufacturing, wholesale/retail and transport and storage—account for the majority of the apprentices and trainees reported in the survey. The survey also found that non-traditional sites of engagement of apprentices and trainees—such as information technology and finance, property and business services—are opening up to apprentices and trainees.

Responses to the survey identified that the process of taking on apprentices combines a formal recruitment (57%) and informal family/community recruitment (43%). The use of informal processes to recruit apprentices is an area that needs to be more closely examined. It is quite possible that large numbers of potential apprentices and trainees are dissuaded from contemplating apprenticeships and traineeships as a pathway because of their lack of connections or access to informal patterns of recruitment.

Employers in the western region are unwilling to commit themselves to doing more than maintaining current levels of employment of apprentices in the medium term. One interpretation of the hesitancy to employ apprentices could be owing to a number of factors, including uncertainty about the continuation of current high levels of economic growth and uncertainty surrounding the introduction of the Goods and Services Tax (GST). Whilst employers did not specifically mention this, the research team suggests that it is unlikely that levels of employment within their firms would be quarantined from any negative impact the new arrangements might have for their firms.

Seventy-five per cent of employers reported that the traditional form of work experience was the primary means of providing students with a 'window' to the world of work. The under-utilisation of structured workplace learning by employers, as highlighted in the survey responses, is a matter for concern and warrants further examination. There appears to be a confusion and lack of understanding amongst employers regarding the difference between work experience and structured workplace learning.

Taking all of the factors into consideration, it is interesting to note that employers listed the growth of their firm (36%) or the size of their firm (27%) as being factors which would either encourage or discourage them from taking on apprentices. The relationship between sustainable economic growth and the potential for engaging, and willingness to engage, greater numbers of apprentices was a significant theme to emerge from the analysis of the employer survey responses.

Employers reported that they were concerned with the standard of training of apprentices (41%). Schofield (2000) recorded similar concerns from employers about the quality and standard of the preparation of apprentices in her report on Victorian apprenticeship arrangements.

Employers identified registered training organisations (RTOs) and the local Technical and Further Education (TAFE) institution as the primary source of information on apprenticeships. This could largely be explained by the established relationship employers may have with their local RTO/TAFE in traditional apprenticeship industry sectors. This highlights the role of NACs in getting the message out to employers about the new arrangements, including the expanded range of New Apprenticeships available. Improving information flows about the benefits to employers of the program is clearly an area for more concentrated effort by the Australian National Training Authority (ANTA), the Department of Education, Training and Youth Affairs (DETYA) and the Victorian State Training Authority—the Office of Post Compulsory Education Training and Employment (PETE).

The proportion of employers reporting that they understood the concept of an apprenticeship and traineeship (40%) was consistent with the proportion of employers who reported that they did not or disagreed (47%). This breakdown was mirrored in the answers received to questions on the clarity of the

information on apprenticeships and traineeships, and incentives to business. This could have been caused by our use of the term apprenticeship and traineeship rather than 'New Apprenticeship' and reflects a level of confusion about the differences between traditional and historic notions of an apprenticeship and the newly re-badged New Apprenticeship scheme.

The majority of employers did not have a strong view on the concept of part-time apprentices or trainees. In fact, 46% responded that they did not know whether Year 11 and Year 12 students made successful part-time apprentices or trainees. This lack of understanding, or perhaps awareness, of the opportunity to engage part-time apprentices, who continue with their studies at VCE whilst undertaking an apprenticeship, indicates that there is some type of information blockage. Any form of information blockage means that the full range of options available under the umbrella of apprenticeships and traineeships is not reaching a crucial audience for this program—the employer.

Conversely, when asked to give an opinion on the long-standing and widely practised school-organised work experience program, employers responded overwhelmingly that this played a positive role in the process they used to recruit new staff. 'On-the-job' and 'off-the-job' methods of training were highly valued by employers as part of the process of developing the skills of an apprentice or trainee.

When asked to indicate a view on the adequacy of information provided by external agencies and organisations charged with responsibility for disseminating information on apprenticeships and traineeships, more employers expressed a view that they did not know (35%) or disagreed (19%) than agreed (32%). The high level of the 'do not know' category may be interpreted as an indication that information flows are not generating the positive effects upon the employers they are designed for.

Whilst a significant proportion of the respondents to the survey indicated that they agreed (41%) with the proposition that apprenticeships and traineeships are meeting the needs of employers, a significant percentage of respondents chose to answer that they did not know.

This response by employers reflects a lack of real understanding amongst a number of employers of the utility of apprenticeships and traineeships. Simply put, a number of employers are hesitant to commit or even comment about apprenticeships and traineeships. The reasons for this can only be hypothesised, but it could be inferred from the results of the survey that the employer responses at least reflect ambivalence towards employing apprentices or trainees. The responses to some of the questions seem to reflect the possibility that employers lack useful information about the utility of the New Apprenticeship scheme for their specific firm or organisation. A reason for this ambivalence might be the impact of technological change and the continued increase in productivity and the concomitant downsizing of the labour force in many sectors of the economy. For many firms, productivity might be rising

whilst at the same time their need for skilled workers is declining. It would follow then from a practical standpoint that the only reason some firms would take on apprentices or trainees would be as an act of altruism[7] rather than as part of a human resource strategy.

Employment, education and training perspectives

The key themes identified by the employment, education and training perspective included:

- structural/organisational issues
- role of skills
- skill formation

The final group of subjects interviewed by the research team included a number of employers and representatives of industry training boards (ITBs), as well as stakeholders from within the education system, such as careers counsellors and individuals with responsibility for co-ordinating part-time apprenticeship programs for secondary school students. In the course of these interviews, a number of significant structural and organisational issues concerning the co-ordination of the New Apprenticeship scheme emerged. In particular, the manner in which information about the program is presented both to employers and to young people needs to be addressed. The co-ordination and management of the New Apprenticeship scheme was also raised in the interviews as an area which needs to be reviewed if it is to become more attractive to employers.

Issues relating to skill formation also emerged. Employers are able to increase productivity and at the same time up-skill their workforce without taking on workers or apprentices. The segmentation of work into specialised traineeships, which had been traditionally the domain of an apprenticeship, was seen as detracting from the appeal of New Apprenticeships both for employers and for young people. The representatives of the ITBs highlighted the consequences for the economy of an ageing workforce and the short-term planning mentality of some employers. In time, the neglect of skill formation could lead to a shortage of skilled workers. Employers will have to be convinced that increasing productivity through up-skilling their existing workers and technological innovation can only be effective as short-term solutions. The ageing population will mean that succession planning needs to be addressed by firms if they are to maintain their viability.

This group identified the important role schools play in the transition from school to work and the significance of careers counselling in this process. Some participants also raised the question of the point at which students are exposed to vocational education. In particular, some of the ITB spokespeople were unhappy with the emphasis some schools were placing on VET in Schools programs as an introduction to a vocational education pathway. The dominance

of the VCE and the goal of a high ENTER score as the only desirable outcome for schools was also questioned.

The relationship between VET in Schools programs, part-time apprenticeships and the New Apprenticeship scheme (in general) needs to be carefully examined in order to make the transition from school to work as seamless as possible. The current situation seems to be creating a mismatch between the goals and aspirations of young people and schools and the way in which New Apprenticeships are promoted to school students by ITBs and other agencies. There needs to be some overall plan or agreement to regulate and help direct young people into a number of pathways which can lead on to either work, further study or VET.

This research has highlighted the growing disparity between government policy and the reality of what companies are actually using training to achieve. This issue was raised in the recent Senate Inquiry into the Quality of VET. It was made clear to the research team that some firms are utilising the existing system to augment their internal training regime by signing up existing workers to short-term traineeships. This short-term solution has significant implications for the long-term skill base of the economy and the viability of New Apprenticeships. The need to up-skill existing workers and to promote the concept of life-long learning is a defensible strategy. However, to do this whilst at the same time restricting the places available to new entrants, including young people, poses both moral and political dilemmas. In an employment-depressed region in regard to youth employment outcomes—such as the west of Melbourne—this policy could exclude large numbers of young people who might otherwise access an entry-level position through the New Apprenticeship scheme.

The research in the context of the current climate of post-compulsory education and training reform

This research project coincided with the publication of two significant documents in the area of post-compulsory education and training in Victoria. These two reports were *The independent review of the quality of training in Victoria's apprenticeship and traineeship system* (Schofield 2000) and *The ministerial review of post-compulsory education and training pathways in Victoria (2000)* (Kirby 2000).

The central objective of Schofield (2000) was to undertake an investigation into the quality of the apprenticeship and training system. Although this focus was not part of the research project, a study of the findings of Schofield's report enriches the research undertaken in this project.

The second major report, which had immediate bearing on the outcomes of this research, was *The ministerial review of post-compulsory education and training pathways in Victoria (2000)*, chaired by Mr Peter Kirby. The Kirby Review

identified a number of key recommendations which would help to facilitate the expansion of opportunities for young people to engage in New Apprenticeships throughout the State, but particularly in Melbourne's west. Most significant of these was the need for a more coherent and integrated approach by all stakeholders in the provision of education for young people (Kirby 2000).

This was in keeping with comments made by key stakeholders concerning the need to create a partnership between education and training, industry and other government agencies and community.

The shift to a 'whole of government' and a 'whole of community' approach called for by Kirby (2000) in the provision of training would help to mitigate some of the earlier comments made about careers counselling and how students arrive at their choices regarding post-compulsory pathways.

Drawing it together

The research report (Demediuk, Holden & Martino 2001) documents the prevailing themes identified in the existing literature and weaves the results of focus groups, interviews and surveys into a comprehensive summary of factors that inhibit the success of apprenticeships and traineeships in Melbourne's western region. The report challenges all participants to commit to providing opportunities for young people by seeking ways of overcoming the barriers that impede their access to the necessary skills and knowledge that will make them a valuable national resource.

The report is presented as a journey, each chapter revealing the opinions, issues and key themes from students, employers and education stakeholders. The chapter, 'Students', reveals young people's understanding of apprenticeships and traineeships, and identifies quite honestly their perceptions and criticisms. Students' comments are typified by one girl's response to a question about her knowledge of New Apprenticeships:

Yeah [I've heard of them], but I don't know what it [New Apprenticeships] is!

The chapter identifies the struggles young people have in balancing their own expectations with those of others and describes the complex processes and competing interests which influence the advice they receive about career paths and post-school destinations. Perception also plays a major role in determining young people's attitudes towards apprenticeships and traineeships, and the influence of the media is particularly strong in this regard. The evidence shows that the image created by the Australian media of apprenticeships or traineeships is particularly negative—but such images can be innocently created. An example of a well-meant message that portrayed a negative image of apprentices was the Victorian WorkCover advertisements in which the young person was either badly injured or killed. It is noted that WorkCover had been targetting employers to raise the awareness of unsafe work practices, but it is little wonder that young people are disinclined to embrace such 'dangerous' work.

'Employers in the west' presents a rather 'clinical' review of responses to an employer questionnaire. It identifies parallels between the size of an industry and the level of employment of apprentices and trainees and some concerns that the anticipated growth in 'new' industries is not evident. There is a significant gap in terms of employer knowledge of the New Apprenticeship system. To compound these problems is an apparent reluctance among employers to commit to taking on additional apprentices and trainees in the face of uncertainty surrounding the introduction of the GST. A most important finding is the evidence that there is uncertainty, or at best ambivalence, about the benefits to organisations that employ apprentices and trainees.

'Employment, education and training perspectives' reports on the opinions of employers and ITBs about apprentices and trainees. It reveals a litany of problems with the system. Comments such as:

> *[the information regarding apprenticeships and traineeships] is totally confusing. The [training] agency gave absolutely no support.*
>
> *Most business people I have spoken to are not even aware of traineeships which … could be excellent if the system was easier.*
>
> *… they told me to find the person [to employ as an apprentice] then they would do the paperwork. I lost interest.*

We have a system in which some employers use government subsidies to up-skill their existing employees, rather than take on young people. This short-sighted solution is done in the face of an ageing workforce—who then will be the workforce of the future?

Some recommendations

The research team identified a number of recommendations for increasing the opportunities for apprenticeships and traineeships in Melbourne's west. The recommendations were clustered under the headings of schools, employers and government. Some of the recommendations are as follows:

Schools

- A pathways planning model should be developed and piloted. This would incorporate the development of a Pathways Portfolio in Years 9–10, which would be added to over the subsequent years.
- A work orientation program needs to be an integral component of the students' regular program within the recognised and assessed school curriculum in the middle years. Work orientation has the potential to facilitate work readiness and encourages an ongoing engagement and commitment to work. In order to strengthen this program, work experience should occur for an extended period and not for a short two-

week, one-off occurrence. Instead, it could occur one day a week over a year, in more than one site, or even in more than one industry. To ensure the success of this program, students need to be adequately prepared for this through preparation for the requirements of the modern workplace; for example, dress, language, manners and workplace culture. Students also need to be adequately supported when they are in the workplace.

Employers

- A more effective media and information campaign needs to be developed which targets employers and informs them of the support available through the New Apprenticeship scheme. Non-traditional sites of employment for apprentices such as information technology and the service sector should be encouraged to examine the benefits of the New Apprenticeship scheme.
- The NACs and other agencies need to expand the level and extent of support provided to employers. Employers need assistance in managing the reporting and administrative demands imposed by the scheme. Further work needs to be done to examine the extent to which employers are using the New Apprenticeship scheme to re-skill their existing workforce and the implications this has for youth unemployment levels and the process of long-term skill formation.

Government

- The WorkCover advertisements featuring young apprentices being injured and bastardised should be reviewed as they are negatively impacting on student perceptions of apprenticeships and traineeships. Government, both at federal and State level, should invest in a campaign to promote a positive image of apprenticeships and traineeships. The campaign needs to address the problem of stereotyping New Apprentices.
- The State Government should implement the findings of the Kirby Review on post-compulsory education and training in Victoria, which would assist in the creation of greater opportunities for young people to engage in New Apprenticeships.

Another beginning

The jobs open to the people without academic credentials are the same jobs that were open to such people a century ago. They are infinitely better paid, and in their working and living conditions they are in developed countries far superior to the conditions under which even privileged people worked and lived then. But such people are now the 'losers', the ones who lacked brains and ambition and

persistence. The 'winners', the knowledge workers, are 'winners' precisely because a business job is only one of their options. (Drucker 1990)

Many of the issues identified by the research team as contributing to the poor uptake of New Apprenticeships in Melbourne's west are not unique to the region. For example, criticism of the source and quality of information available to students about New Apprenticeships could be applied to other regions of Melbourne and throughout the nation. So too, the apparent dominance of the VCE ENTER score and entry into university as the only desirable outcomes for secondary school students.

Melbourne's west is unique because of the constraints to identifying a post-school pathway which the young people themselves have identified. Young people have a desire for upward mobility, but the backdrop of an employment-depressed region in regard to youth employment outcomes and the attitude of employers to entry-level training, coupled with the 'old economy' nature of most apprenticeships has, in a sense, 'folded' in the range of options open to young people in the region.

As acknowledged at the beginning of the chapter, the research has identified issues outside the parameters of the research project, such as the need to improve career counselling and career pathway planning, the encouragement of life-long learning and multiple entry and exit points for a young person's life of learning.

Notes

1 For the purpose of this chapter the terms apprenticeship/traineeship will be used to refer to the Commonwealth New Apprenticeships program.
2 The full title of the original project was: Increasing opportunities for apprenticeships and traineeships in Melbourne's western region (Demediuk, Holden & Martino 2001).
3 Statistical details are based upon the 1997 ABS Business Register Count
4 ibid
5 City Link is a privately funded electronic tollroad linking three of Melbourne's freeways, creating routes between Melbourne Airport, the port and industrial centres.
6 To represent the non-government sector the team chose to examine Catholic systemic schools as it was felt that the Catholic system was comparable in size and approach to government schools. The Catholic system is attempting to chart a coherent approach to the provision of VET. The team selected three government co-educational schools and three Catholic systemic schools (one all boy, one all girl, and a co-educational school). In each of the schools, students in Year 10, Year 11 and Year 12 were interviewed.
7 A report prepared by the Western Australian Government entitled, *New apprenticeships: Making it work* (Western Australian Department of Training 1998, p.47), describes the factors that motivate employers to take apprentices and trainees as being a mix of 'altruistic' and 'business' motives.

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The report on which this chapter is based is published electronically on the world wide web at:
http://www.ncver.edu.au/research/proj/nr9021.pdf

Apprentices' and trainees' English language and literacy skills in workplace learning and performance: Employer and employee opinion

Shirley O'Neill
Annabelle Gish

Introduction

THE NEW APPRENTICESHIP system has emerged over the past two years in the context of substantial change in both vocational education and the workplace. This has resulted in a significant increase in uptake of apprenticeships and traineeships. Changes have also occurred in the workplace in terms of the nature of work, including an increase in use of technology (Courtenay & Mawer 1995; Stuart 1996). The nature of work and traditional views of literacy have also been under scrutiny (Wickert 1993; Gee, Hull & Lankshear 1996; Schultz 1997; Brock 1998; Ray 1999), and amid workplace reform, job redesign, restructuring and modern management practices new emphases have emerged, such as the ability to work in a team and be information literate. Within this context, this study set out to investigate employers', apprentices' and trainees' opinion of the way English Language and Literacy (ELL) skills impact on workplace learning and performance.

ELL skills and vocational education and training

The importance of having an appropriate level of ELL skills is well recognised as making a major contribution to an employee's ability to function in the job and undertake ongoing learning in the pursuit of future career pathways (Watts & Watkins 1991; Deakin & Sims 1994). Similarly, the concept of the lifelong learner demands one has skills to adapt and change to suit workplace changes. Such skills include the ability to communicate and think critically in the language in use. The integration of ELL skills into training packages is also a priority of vocational education and training (VET) being strongly featured in policy and programs (DEET 1995a). Outcomes in ELL, employee needs and workplace tasks have been the focus of much research into adult literacy levels and the literacy levels of workers (Rizzetti 1995; Kelly & Searle 1999; Wickert &

Kevin 1995; ABS 1997). This research suggests that many workers experience some difficulty in carrying out their work duties because of low level ELL skills. Impacting on this is the fact that ELL skill demands in the workplace vary between jobs within and across industries. Also, it cannot be assumed that ELL skills learned at school directly transfer to the workplace (Prince 1992), although recent research argues that high quality foundation learning in school is essential (OECD 2000).

Literacy in the workplace

Review of the literature shows that there are differences of opinion about workplace literacy, particularly between employers and educators. Recent research suggests employers generally hold a traditional concept of ELL skills drawn from practical experience rather than specialist knowledge. Business people typically equate literacy with the ability to write with correct spelling, punctuation and grammar (Cahill 1998). Gee, Hull and Lankshear (1996) argue that this is a narrow view. They examine literacy in terms of how the social practices of the workplace induct the employee into a particular discourse which strongly governs behaviour. In this sense, discourse refers to the way a particular group or subgroup, such as mechanics, bricklayers, hairdressers, nurses or teachers, behaves. This behaviour includes how they communicate, interact, read and write, what they value, and how they use resources and tools of the particular trade. Such discourse is seen as operating primarily to ensure a business strategy agenda which represents the business' interests first, making workers' real needs and aspirations secondary. While this may be so, ELL skills remain well recognised as crucial to employees' ability to function in the job and to engage in training. Similarly, as Watts and Watkins (1991) emphasise, literacy skills are necessary for people to learn and adapt to workplace and career changes. They are also necessary to engaging in the process of lifelong learning.

While Courtenay and Mawer (1995, p.5) state 'there is no simple link between language proficiency and workplace competence, even in jobs that involve considerable communication', the fact that a certain level of literacy is necessary for both work and training further demonstrates the importance of these skills. The current, preferred approach to teaching ELL skills is to integrate them into training packages. Research findings have provided substantial support for the effectiveness of this approach (Hamilton 1992; Courtenay 1994; Courtenay & Mawer 1995; Kelly & Searle 1999). Typical workplace ELL tasks and the impact of improved ELL skills in the workplace are identified in reports of good practice across a range of industries (Rizzetti 1997; Wallace & Murray 1997).

Language and literacy training is seen as vital to ensure workplace health and safety, to develop employees' confidence and self-esteem and to undertake skills training successfully. Hislop (1994) identified workplace communication problems relating to a range of activities which effected both workers and

managers. Such communicative problems were associated with completing forms, understanding directions, asking questions, completing records, misinterpreting messages, instructions and plans, and misunderstanding quality assurance and workplace health and safety requirements. These problems were seen as having a major negative impact on both workplace production and workplace learning. It was concluded that without ELL skills development the employees would be unlikely to achieve and access a subsequent level of training. In addition to the need to focus on functional literacy skills, it was emphasised that industry trainers needed to develop their own teaching skills to make training accessible for all workers. While knowledge of functional grammar was seen as necessary for trainers, employers and employees to support effective work practices, it was recommended that trainers increase their awareness of the way language, literacy and cross-cultural issues impact on workplace learning, emphasising the difference between school and workplace concepts of literacy.

Methodology

The research was designed to gauge the opinion of a sample of employers and their apprentices and trainees from a range of industries on the adequacy of employees' (apprentices and trainees) ELL skills for workplace learning and performance, the perceived needs and strengths. ELL skills were considered in terms of a broad range of workplace outcomes, including aspects of functional literacy and interpersonal communication. The research was conducted in three main stages: literature review, consultation and survey item development, trial and survey administration and case study interviews. The survey was confined to the State of Queensland, thus limiting generalisation of its result to only that State. Case studies undertaken in three States (Queensland, New South Wales and Victoria) across a range of industries provided supplementary data. The employers, apprentices and trainees were surveyed individually, although they came from the same businesses. An informal reference group of stakeholders assisted with survey development, sample selection and contact with businesses. The developmental process included input and feedback on survey items to reflect workplace learning and performance outcomes which depended on ELL skills. These items (47) were presented in a traditional Likert scale format and were randomly ordered on the survey to avoid the potential ordering effects. The items were categorised for the purposes of analysis to reflect the following eight activity sets: teamwork; communication; reading; writing; mathematics, technology and media; procedures; workplace understanding and workplace learning (see appendix 1). Background data were also collected from respondents, along with open-ended questions on perceived strengths and needs of ELL skills.

The survey requested employers focus on their experiences with apprentices and trainees during the past two years only to help ensure responses reflected

the current New Apprenticeship system experience as far as possible, bearing in mind the context is still relatively new.

Workplaces for case studies were selected from employers who were advertising for apprentices and trainees during the research period. Follow-up interviews, both face to face and by telephone, were also conducted with volunteer survey respondents and other stakeholders involved with ELL issues in the workplace. Interviews were informal and semi-structured and were based on the survey questions but sought to identify the practical experience of the workplace to supplement the survey opinion data and questions arising from data collection. It also allowed some testing of the research items and issues interstate. This methodology allowed for the comparison of the perceptions of those stakeholder groups directly involved, the interview data collected in the actual workplace, and the outcomes of the literature review and other related policy documents.

Sample selection and response

A stratified simple random sample of 185 Queensland businesses/industries which were currently employing up to five apprentices and/or trainees was selected using the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) database. Of these employers, 45% employed apprentices (83) and 55% employed trainees (102) across a cross-section of industries proportional to popularity and taking account of gender differences in choice of industry. While businesses may employ both apprentices and trainees, the sampling procedure did not select more than one employee per business. The apprentices and trainees were also randomly selected within each business. Employers and employees were contacted separately. Sample selection complied with the national standard for data collection in VET by using the standard classifications of industry and region. The sampling procedure was weighted for female and male popular industry choices and the overall proportion of apprentices to trainees (there are more trainees than apprentices in Queensland). The focus was on smaller businesses and the 17–29 age group. The overall response rate was 56%, with a fair representation of industry categories.

Issues, trends and discussion

Investigation of the impact of apprentices' and trainees' ELL skills on workplace learning and performance revealed a complex situation in terms of both policy and practice. Emerging issues and trends related to:

- differences between employers' and employees' opinion
- job variations in ELL skills requirements
- ELL skills and other skill demands
- ensuring ELL skills are addressed in training

- the changing profile of apprentices and trainees
- change and the business environment
- recruitment, selection and mentoring
- developing ELL skills
- functional literacy skills
- ELL skill demands for the job compared with those required for study
- areas for improvement

The findings related to these issues are covered in the following sections.

Employer and employee opinions

Figure 1 shows the mean percentage positive ratings for each group and subgroup surveyed. Employers' responses to the survey items were compared with those of employees (apprentices and trainees). In addition, the responses of employers of apprentices were compared with the responses of employers of trainees, and apprentices' responses were compared with those of trainees. When tested statistically (using t-test for independent samples, alpha levels set at 0.5) it was found, as predicted, that employees were significantly more positive about the adequacy of their ELL skills than were employers ($p < .01$). Employers of apprentices were significantly more positive about the adequacy of apprentices' ELL skills than were employers of trainees ($p < .01$). There was no significant difference between apprentices' and trainees' responses to the survey items. Both employee groups were generally very positive about their ELL skills. The overall employer group and the two subgroups of employers of apprentices and employers of trainees, on average, were less positive than expected about their employees' ELL skills.

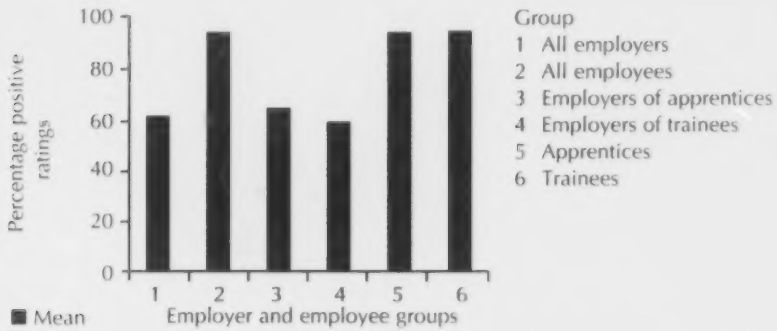
The survey results showed that, in general, apprentices and trainees perceived their ELL skills as quite adequate for their workplace learning and performance. This was in sharp contrast to the opinion of their employers, who were much more conservative with their ratings and in some areas quite critical.

Employers' positive ratings for apprentices' skills to *Put workplace health and safety rules into practice* and *Read training materials* fell above the group mean compared with their ratings for trainees on these skills, whose employers placed them below the mean for their group. But, employer ratings for both apprentices and trainees fell below the mean for the respective groups for the adequacy of their skills to *Communicate effectively with customers, Deal with misunderstandings and problems, Write for study needs* and *Participate in off-the-job training needs.*

Both apprentices and trainees were rated least favourably for their ability to *Spell and punctuate their writing.* In addition, both employee groups were rated relatively low on their ability to *Write for workplace learning needs* and *Interpret graphical information.*

Employer ratings showed apprentices and trainees to be most similar when it came to the ability to *Appreciate constructive criticism, Learn skills in the workplace, Complete workplace forms, Write for workplace learning needs, Understand workplace health and safety rules, Follow verbal directions* and *Understand times and dates*. Only in the case of skills to *Understand on-the-job training needs* did employers provide relatively more positive ratings for trainees than apprentices.

Figure 1: Survey mean percentage positive ratings



The items where less than 50% of the employers gave positive ratings on the adequacy of apprentices' and trainees' ELL skills included the ability to *Read and understand plans and diagrams* (49%), *Understand and use technical language* (49%), *Pay attention to detail* (47%), *Write for study needs* (43%), *Prioritise their work* (42%), *Use study skills* (42%), *Write for workplace learning needs* (42%), *Identify the cause of problems* (38%), *Interpret graphical information* (36%) and *Spell and punctuate their writing* (35%).

The vast majority of apprentices and trainees agreed or strongly agreed that their ELL skills were adequate to do almost all of the activities listed. The four activities which both employee groups rated least positively, although still much more positive than their employers' ratings, were *Interpret graphical information* (89%), *Write legibly* (74%), *Spell and punctuate my writing* (73%) and *Use computers as required* (56%).

The overwhelming positive responses of apprentices and trainees compared with employers suggest that these employees hold an extremely positive view of their achievements while in training. Regardless of this apparently inflated view, comparison of employers' and employees' ratings shows that both groups were relatively least positive about the same activities, which are those rated lowest by apprentices and trainees (only 59% of employers agreed or strongly agreed that apprentices and trainees could *Use computer skills as required).*

In addition, while employers' ratings were more positive in relation to apprentices' skills than the skills of trainees, their responses did not differentiate for these four lowest rated items. By contrast, trainees (64%) were more positive

about their ability to *Use computers as required* than apprentices (46%), although this may reflect more opportunity for trainees to use computers in terms of the different industry areas. Trainees (100%) were more positive about their ability to *Complete workplace forms* as required than apprentices (84%).

Only just over 50% of employers agreed or strongly agreed that apprentices' and trainees' skills were adequate to *Do basic mathematical calculations*, but employers of trainees (60%) were more positive about this skill than employers of apprentices (42%).

Employers were substantially less positive than apprentices and trainees for the following skills: *Write for workplace learning needs, Write for study needs, Use study skills, Interpret graphical information, Prioritise their/my work, Discuss what they/I do or do not understand* and *Deal with misunderstandings and problems*.

Apprentices and trainees were seen as being relatively competent in all of the four procedural-related activities contained in the survey. These procedures represented many everyday workplace tasks: following verbal directions, carrying out sequences of activities, putting workplace health and safety rules into practice and taking telephone messages accurately.

In spite of apprentices' and trainees' extremely positive opinion about their ELL skills, a small proportion of respondents reported that they would like to improve their skills to help with both work and study. The skills they wanted to improve included writing, spelling, punctuation, reading comprehension and public speaking. Both employers and employees identified use of computers, the ability to write legibly, spell and punctuate writing, and interpret graphical information as areas for improvement.

There was also a difference between employer and employee views on how ELL skills are demonstrated in the workplace. Employers tended to perceive ELL outcomes in terms of apprentices' and trainees' ability to communicate effectively in the workplace and their functional literacy skills, such as ability to compose written texts, write legibly and use accurate spelling, punctuation and grammar. On the other hand, apprentices and trainees were very confident of their ELL skills and tended to emphasise their ability to actually carry out the work as being the best evidence of their skills. It is of interest to note that some employers who were critical of employees' functional literacy skills made simple errors themselves, such as using a plural apostrophe 's' rather than singular, errors in subject–verb agreement, tense and common spelling errors. Similarly, some apprentices and trainees who argued their ELL skills were adequate or better than required for their job also made such similar common errors.

Discussions with apprentices and trainees suggested that the fact that they see themselves as being able to physically 'do the job' overrides to a large extent any weaknesses they may have with their ELL skills. Another reason for this view may be that they see 'the job' as static rather than dynamic. This attitude

may also be reinforced by the fact that competence-based assessment procedures deem workers competent with a tick on record in a training log which reflects many activities of which ELL skills may have only a minimal role. In keeping with this perception is the fact that many employees may not carry out work which has high profile literacy skill demands.

Employers' responses suggest they are generally happy with the way apprentices and trainees communicate with colleagues and work to achieve a team goal. But, when workplace interpersonal communications are more demanding, apprentices' and trainees' communication skills were seen as less adequate. For instance, employers were less positive about these employees' ability to communicate effectively with supervisors and customers, although they were seen as able to show sensitivity to customer needs. Skills were viewed less positively for dealing with misunderstandings, taking the viewpoint of others into account, taking responsibility for their own work and appreciating constructive criticism. Although apprentices and trainees were also seen as being able to participate in training discussions, they were seen as less equipped in terms of skills to discuss what they did or did not understand. From the employer perspective, this is explained by the fact that these employees tend to be immature and lack experience in the workplace because it is usually their first real job. This contrasted with apprentices and trainees being more likely to see themselves as being 'picked on' or misunderstood depending on employers' ability to discuss such matters sensitively and constructively. Bearing in mind the survey focussed on apprentices' and trainees' ELL skills, it would be expected that they would be somewhat defensive in their responses. The findings suggest the need for both employers and employees to work together to develop the skills which underpin these kinds of workplace outcomes (e.g. interpersonal skills and negotiation skills for colleague to colleague, trainee to supervisor and customer relations).

Employers were critical of apprentices' and trainees' readiness to begin learning, their ability to use study skills effectively and prioritise their work, although they saw them as able to learn skills in the workplace, find information, and understand times and dates. In general, they viewed apprentices and trainees as being able to perform their workplace duties and understand workplace processes and products, instructional manuals, workplace health and safety rules and key concepts, and issues in the workplace. Overall, employers suggested that there should be a greater focus on teaching apprentices and trainees about business operations, quality assurance and customer service. A grasp of such knowledge was seen as necessary for employees to be able to understand the 'how and why' of their work. Just as one engages with a program of learning, it seems apprentices and trainees need to engage with the workplace learning and performance environment. This is not unrelated to the mentoring process and the transitional phase (often from school to work) when the new employee needs to gain an overview of the industry, the job and his or her role. Aspects such as the production cycle,

customer service, roles and responsibilities of colleagues and expectations of managers and operational information were highlighted as important.

ELL skills, therefore, are required at every step of the way in work and the learning pathway, with oral communication playing a large role in the whole scheme of things but seemingly played down in its recognition as both underpinning workplace communications and delivery of training. Since the majority of apprentices and trainees move from school to work and others are typically moving into a new area, it seems the quality of the workplace learning environment and this transitional phase has the potential to provide an important foundation for future success in learning and work.

With regard to literacy skills, employers were generally positive about apprentices' and trainees' basic reading skills, seeing them as able to read to carry out their work duties, follow instructions and read training materials. But most employers believed that they were less competent when it came to potentially higher level tasks such as reading plans, diagrams and visual materials. Similarly, employers viewed apprentices and trainees as being able to write to complete forms as required in the workplace but were less positive about other more demanding writing tasks. These tasks involved writing notes, messages and letters, writing for study needs and workplace learning needs. Apprentices and trainees were also less confident about their writing skills, particularly writing for study needs. Reading and writing extended written texts were reported as difficult. Although apprentices and trainees were seen as relatively competent in understanding visual communication, such as signs, pictures and advertising material, employers were not so positive about their ability to do basic mathematical calculations (with or without a calculator), understand and use technical language and interpret graphical information.

When the opinions of employers in the three subgroup industry categories of *Intermediate clerical workers, Mechanical and fabrications engineering tradespersons* and *Other tradespersons and related workers* were compared with those of the overall group of employers, employers of apprentices and employers of trainees, substantial differences became apparent. (It was not advisable to carry out a similar analysis for apprentices and trainees in view of the large proportion of positive ratings.) Since stratification of the original sample took into account all 20 industry categories and the proportion of businesses with apprentices and trainees within each category, the number of respondents for most categories was too small to be used as a basis for comparison between categories. These three industry categories were selected on the basis of having the greater number of respondents, though still relatively small. These categories, as would be expected, are reflective of industries with the most apprentices and trainees but also allow for some contrast between industry areas and jobs. The categories, number of respondents and group response rate were Intermediate clerical workers (19—almost 61% response rate), Mechanical and fabrications engineering tradespersons (12—85% response rate) and Other

tradespersons and related workers (e.g. hairdressing 12—almost 43% response rate).

The items were able to be categorised for the purposes of analysis to reflect the eight activity sets of: teamwork; communication; reading; writing; mathematics, technology and media; procedures; workplace understanding and workplace learning. Mean positive response ratings were calculated for the group of items within each activity set. These mean positive response ratings appear in table 1. It needs to be acknowledged that the numbers of items in the activity sets are relatively small, particularly for Reading (4) and Procedures (4), with five items for each of the activity sets Communication with customers and supervisors, Mathematics, technology and media, and Workplace understanding. Six items contributed to Writing skills, eight items for Teamwork and ten items for Workplace learning.

Table 1: Mean percentage positive ratings for employer groups

Activity	Group 1. All employers (Es)	Group 2. Es of apprentices	Group 3. Es of trainees	Group 4. Es of intermediate clerical workers	Group 5. Es of mechanical fabrication engineering tradespersons	Group 6. Es of tradespersons and other related workers
Teamwork	59.1	63.5	55.8	46.7	54.2	36.5
Communication	64.6	64.2	65.2	57.9	50.0	45.0
Reading	61.3	69.5	55.0	48.7	47.9	39.6
Writing	51.0	53.3	48.8	48.3	51.4	23.6
Maths, tech., media	56.2	57.4	54.9	57.9	48.3	36.7
Procedures	67.3	70.8	64.3	61.9	52.1	50.0
Understanding	66.0	73.8	62.8	56.8	63.3	58.3
Learning	65.5	67.9	63.2	55.8	55.0	45.0

Note: Es = employers

This breakdown shows that employers of apprentices were more positive than employers of trainees about their employees' ELL skills for all activity sets except communication, which differed by only 1% from the overall group. Employers in the three industry category groups provided less positive ratings compared with the employer group as a whole and the groups of employers of apprentices and employers of trainees. Writing skills for Mechanical and fabrication engineering employees and Intermediate clerical workers were rated on a par with the overall group of employers and employers of trainees respectively, but ratings by employers of the Other tradespersons group were much less positive. Employers of Intermediate clerical workers also rated their employees' ability to spell and punctuate writing much more positively (58%)

than the other employer subgroups and the overall group of employers (35% as noted earlier).

In the case of Mathematics, technology and media, ratings by employers of Intermediate clerical workers were the same as ratings by the overall group of employers and employers of apprentices compared with much less positive ratings by employers of Other tradespersons and related workers. With regard to the Workplace understanding activity set, employers of apprentices were most positive, with employers of Mechanical and fabrication engineering tradespersons also providing ratings on a par with the overall employer group.

Of additional interest is the fact that employers of Mechanical and fabrication engineering tradespersons rated the skills of their employees above the average of the overall group and all other subgroups for being able to perform workplace duties (92%), Understand visual communication (e.g. signs, pictures, advertising material) (92%), Appreciating constructive criticism (92%), Understanding and using technical language (75%) and Completing forms as required (75%).

Employers in the Other tradespersons and related workers category, to which employees in hairdressing typically belong, had a wider ranging opinion of their employees' ELL skills and overall gave lower ratings than the average. In addition, employers of apprentices were more positive than employers of trainees. It was also of interest that employees in the Mechanical and fabrication engineering tradespersons category received higher ratings than other groups for specific activity groups: teamwork, writing, workplace understanding. While results of the subcategory comparisons should be treated with caution because of sample sizes and response rates, these results do reflect other recent findings showing variation across industries. For instance, the employer satisfaction with graduate skills survey (DETYA 1998) found that employers generally rated Technical and Further Education (TAFE) graduates in the hospitality industry very highly compared with those in the retail trade on similar skills. Skills which new graduates were seen as needing to improve in were problem-solving skills, oral business communication skills and interpersonal skills with other staff. Similarly, qualities employers identified as important in the workplace included the latter skills together with teamwork skills, comprehension of business processes, and skills in literacy, numeracy, computing, writing, business communications and time management.

Job variations in ELL skill requirements

Information from the literature review, site visits and survey comments provide evidence of substantial variation in on-the-job ELL demands depending on the nature of the work. It was found that composing written texts may comprise only a small part of the overall work in some industries or have very limited application; for example, take a short telephone message. It is a concern that the on-the-job literacy demands may do little to maintain many employees' literacy

skills over time. English literacy demands may be substantially greater when it comes to fulfilling the requirements of training. Although Queensland guidelines (DETIR 2000) emphasise the need to keep ELL demands at the same level as those required to do the job, in keeping with a seamless approach to on-the-job and off-the-job training, this is open to question. One might ask how feasible it is for employees, in positions which have limited ELL demands, to embark on a training pathway which does not demand higher level ELL skills or different ELL skills. The question arises as to how one acquires new knowledge or develops learning-how-to-learn skills when starting from limited ELL skills. In addition, if the ELL skills learned at school do not directly transfer to the workplace as noted earlier (Prince 1992), then one is faced with the need to clarify and question as to what constitutes training/learning demands particularly as they relate to ELL skills.

In Mawer and Field's (1995, p.38) discussion of the issues impacting on non-native speakers of English, they specify that 'the language and literacy levels required to participate in training are often higher than those which are needed to perform the work'. It was implied that the ELL skills to acquire knowledge may be more demanding than those required to do the job. The trainer is faced with providing an inclusive curriculum and catering for a diverse range of communicative styles; for example, standard print materials may be sufficient for some learners but others may not have the necessary language or reading skills. Catering for different learner backgrounds becomes substantially more difficult as content knowledge in training increases in quantity and complexity and employees need to acquire new knowledge and skills, sometimes at speed.

Again, comparison of ELL skill demands across the different industry categories—for example, clerical workers, foundry and engineering workers and hairdressing—highlighted substantial differences. Employers in the clerical workers category rated their employees' skills in spelling and punctuating writing above the average of the overall group. This is in keeping with the findings of Wickert and Kevin (1995, p.39) who stated that 'the better performance of clerical workers may reflect their greater use of literacy skills at work'. It also cannot be ruled out that people who have higher level ELL skills in the first place are attracted to this kind of work. But, both the maintenance and development of ELL skills may be very much related to the level of ELL skills demanded on the job.

ELL skills and other skill demands

Course completion rates suggest apprentices and trainees in general cope reasonably well with the demands of training. They tend to study more intensively, undertaking more training modules during a year than general VET students yet achieve the same completion rates (NCVER 1999). Nevertheless, it may be argued that the new apprentice is operating in a different performance and learning context from before in which the precise ELL skills are yet to be

assessed. Organisational and technological changes are seen as increasing workplace ELL skill demands (Eubanks 1990; Kirsch & Jungeblut 1992). Grover (1990) argues that workers today rely more than ever upon their higher level cognitive skills in their use of technology for both work and learning. Other skills include recognising the need for information, formulating questions based on information needs, organising information for practical application and accessing sources of information including computer-based and other technologies (Doyle 1992). In addition, in keeping with the notion of the autonomous learner, where the teacher is the facilitator of learning, the student needs to be able to take responsibility for his or her learning. This means the learner requires skills to manage his or her own learning. 'Learning how to learn' skills involving information and computer literacy, thinking skills and research skills cannot be discounted as necessary for the new apprentice. According to Burnheim (1993), the move to a knowledge-based society means survival in the workplace depends greatly on being information literate. Information literacy skills include a range of new skills deemed necessary to allow the learner to engage in participatory learning applications. It is not clear as to what this may mean for examining the impact of apprentices' and trainees' ELL skills in workplace learning and performance. But it leads one to question where these various skill sets, including key competencies and skills for lifelong learning, fit in relation to ELL skills in workplace learning and performance.

Ensuring ELL skills are addressed in training

The policy to integrate ELL skills into general units of competence goes a long way to making sure that both learning experiences and assessment are based on authentic workplace-based tasks and texts, although there may be three major drawbacks to achieving consistency in delivery of ELL skills across training packages. The first is the fact that identification of ELL skills depends on an analysis of specific industry needs, which is a specialist task in itself (Brown 1995; Norris et al. 1998). The second is the fact that there is variation in the extent to which ELL skills are made explicit across training packages. Third, regardless of whether ELL skills are implicit or explicit in training packages, the nature of delivery may vary from site to site for a variety of reasons. These reasons include trainer background in literacy, the ELL skill demands of the training program learning experiences, learner readiness, interest, motivation and expectations to mention but a few. The level of demand for ELL skills also may vary according to the different industry areas and there may be different emphases on oral communication skills compared with skills in reading and writing. Wickert and Kevin (1995, p.37) noted that 'different jobs in different companies and different locations require different profiles of literacy'. Within this context, training programs generally expect learners to have 'basic ELL skills' to engage with the program. The teaching of functional literacy skills is largely seen as the responsibility of those with specific expertise in the area, although training is expected to accommodate a wide range of learner

backgrounds and skills. In the case of apprentices and trainees, they also have access to various avenues of assistance, including specialist help and attendance at specialist courses.

Trainers also need specialist knowledge and skills to be able to cater for the range of learner backgrounds, to deal with ELL demands of the job as well as for the ELL demands of learning. Current approaches in junior secondary education stress the importance of linguistically informed teaching rather than the teaching of linguistic terms or concepts, or other discrete instruction in skills (Frater 1998). Trainers' access and use of appropriate resources and strategies to avoid a heavy reliance on print materials is also necessary. The current approaches to training integrate ELL skills into training packages is seen as having several advantages over having separate ELL modules. It is expected to ensure that ELL skills are addressed in the context of the workplace since they go hand in hand with the various units of competence which rely upon these skills; for example, *Receive and process reservations* in tourism and *Undertake interactive workplace communication* in the metal and engineering industry. Such an approach provides a more meaningful context for learning and is less likely to stigmatise those who may require assistance.

The changing profile of apprentices and trainees

Recent changes to establish the New Apprenticeship system were reflected in the findings of the study in terms of the profile of the sample of apprentices and trainees. There was evidence of the broadening of the base of training for apprentices and trainees, with those already in employment being able to undertake traineeships and the increased uptake of school-based apprenticeships. There was also evidence of some changes in terms of the traditional view of who is likely to undertake an apprenticeship and for how long, but most employers and employees did not have the most up-to-date knowledge of the current approach. For the groups in this study, the age range for trainees tended to be greater than for apprentices, and there was evidence that traineeships are catering for some persons who may have left school relatively early. Of the sample of apprentices, 85% had completed Year 12 compared with 45% of trainees entering with this level of schooling. Employers' more positive ratings of apprentices than trainees may reflect to some extent the generally higher entry level of the apprentices and their more recent school and vocational education preparatory course experience. There is also evidence that some people move from one training situation to another. One trainee had undertaken an apprenticeship previously, but it was not clear how often trainees and apprentices make such changes and why.

Change and the business environment

Provisions for apprenticeships and traineeships also occur within a context of change within the business environment. Employers comprise a diverse group,

with some having moved between businesses in different industry areas. These employers have the experience of employing apprentices and trainees across different industry areas and workplace contexts. Some business proprietors have long-term experience in employing trainees and apprentices in particular, but, from their perspective, little seemed to have changed in the system. However, changes occur in the way businesses operate and business proprietors move to other businesses and sometimes close. Businesses may employ either or both apprentices and trainees, with these employees following different training pathways. The work experience of apprentices in particular may involve changing work environments depending on the industry. For instance, an apprentice carpenter and joiner may move from building site to building site for the same employer or may move from one employer to another as employers fulfil their contracts. Since some businesses offer more than one type of traineeship—for example, retail sales and business management—or employ several apprentices working in the same area, this provides an insight into the scope of training arrangements which may impact on a workplace at any given time.

Recruitment, selection and mentoring

Employers tended to see the recruitment and selection process as ensuring their apprentices and trainees have adequate ELL skills, although this does not necessarily work in practice. Their criticisms of employees' functional literacy skills appears to be intertwined with their perceptions of employees' attitude to work and level of maturity, highlighting the importance of the role of interpersonal skills in the employer, employee, colleague and customer relationship. Several factors appear to influence employers' opinion as to whether their apprentices and trainees have potential to advance in the job. These factors included apprentices' and trainees' attitude to the job, the adequacy of their ELL skills, particularly functional literacy skills, and the ability to get along with customers and colleagues. Employers tend to make allowances for some degree of immaturity because of age and their views on youth, and tend to be to some extent sympathetic towards the younger employees being in a transitional learning phase if they are in their first job. From the apprentice perspective, there was a request for the apprenticeship program to follow a very strong mentoring process with emphasis on expert demonstration, guided practice and scaffolding support until independence is gained (see Rose 1994). Apprentices emphasised that it was important for their success in the workplace to have a mentor who was sympathetic to the on-the-job learning situation and who had skills to demonstrate and support their learning.

It was found that employers' experiences with the recruitment and selection process also contributed to their perceptions of prospective apprentices' and trainees' literacy skills. The way applicants presented and wrote their applications was seen as providing preliminary evidence of literacy skills. The

application process was seen as acting, to some extent, to ensure an apprentice or trainee had a reasonable skills' base to cope with work and training.

Employers were also of the opinion that high levels of ELL skills were necessary if employees expected to follow a career path. Overall, the selection process was seen as assisting greatly in ensuring apprentices and trainees had the skills to undertake an apprenticeship or traineeship. Employers who were unhappy with the level of their apprentices' or trainees' literacy skills also tended to criticise other aspects of worker performance as unsatisfactory. Besides considering applicants' ELL skills, employers also emphasised the need for employees to be committed to the job, to be able to concentrate, be responsive and think critically. Employees' ability to conceptualise the business and its operations was also seen as underpinning their understanding and implementation of quality assurance processes and provision of customer service.

Developing ELL skills

When people perceive their skills as inadequate, they are likely to have less confidence with ELL tasks, low self-esteem and low expectations depending on the workplace demands (Deakin & Sims 1994). This typically translates to an avoidance of situations which draw attention to ELL skills. Thus, implementation of a work and study oriented intervention strategy can be expected to present a substantial challenge. Employees requiring assistance with ELL skills are likely to have 'suffered' in some way in their past educational experience. They are more likely to have low self-esteem and lack confidence when it comes to tasks involving reading and writing. This influences the way literacy intervention may be delivered in workplaces and work-related settings. Receiving extra tuition in ELL skills may be seen as legitimate for employees who are non-native speakers of English. However, those who are native speakers can feel stigmatised by such intervention. As a consequence of this latter view, such employees are overlooked when opportunities arise to progress in the workplace. Additionally, other less overtly demonstrable, valuable skills which an employee has to offer may be overshadowed by perceptions created by the prominence of poor handwriting, punctuation, spelling and grammar. This creates a situation where the person may feel inadequate because of difficulties with ELL skills. They may also feel devalued through lack of recognition of their strengths, depending on the way the situation is dealt with in the workplace or in training. As with all learning, there is a need to create a positive supportive learning environment which builds on students' existing skills and sets realistic achievable goals.

That there is a recognised need for assistance with literacy skills for apprentices and trainees and implementation is supported by the employment of government literacy consultants. In addition, guidelines in Queensland (DETIR 2000) focus on assessing apprentices' and trainees' needs in this area so

that training programs can build on and develop existing skills and appropriate assistance or intervention can be provided or advised as necessary.

Functional literacy skills

A comparison of National Reporting System (NRS) language and literacy features across levels (DEET 1995b) shows that functional literacy skills are comprehensively described. For instance, Level 2 includes 'reads and writes legible script', 'conveys overall meaning despite possible variations in spelling and grammar', with Level 3 specifying 'Uses and comprehends some complex and compound sentences', 'Uses legible hand writing style as required by audience and purpose for writing' compared with Level 4 features 'Spells accurately most frequently used words', 'Uses punctuation with few errors', 'Uses and comprehends simple and complex syntactic structures; grammatical variations rarely interfere with meaning and comprehension'. Thus, common errors made by both employers and employees while completing the survey for this research may be argued to be at Level 4, and since meaning was not impeded, the completed survey may be judged appropriate for the audience and purpose.

Employers' opinions of apprentices' and trainees' ability to spell, use appropriate grammar, sentence structure and punctuation and write legibly reflected a need for improvement in these areas. Although apprentices' and trainees' survey ratings showed them to be highly confident about their ELL skills, some need to improve was identified in their written responses and in interviews. For activities which required more integration of cognitive skills, interpersonal skills and technical demands then employers saw a need for skill development.

Of the many possible workplace literacy tasks, report writing is continually mentioned by employers as an activity which is not readily done well. Reports for the public domain were seen by employers as reflecting the image of their company. These workplace documents were also seen as contributing to quality control and maintaining a competitive edge in the business world. A report may provide a record of advice to customers, which may be required later for future services or customer complaint and litigation. Reports were often 'first draft' because they are written quickly on completion of a task and often in the field in the presence of the customer. Yet they need to be of the highest standard for this purpose and audience. Another common literacy task is the apprentice's maintenance of his/her work log. Since it has to endure over time, organisational and presentation skills are necessary along with the need for neatness, legible hand writing, accuracy in recording and transcribing information and completion of other pencil and paper tasks such as assessment activities. Whether or not an apprentice or trainee is successful in workplace learning and performance depends on many factors of which functional literacy skills and clarification of workplace tasks must be an essential part.

ELL skills for job versus those required for study

The Queensland guidelines (DETIR 2000) focus on delivering programs which do not require ELL skills at a level beyond those required on the job. But this appears debatable in the context of the lifelong learner. First, since almost half the workforce work at the operational level and most VET enrolments are at Certificate III level then it is quite likely that training will involve some ELL skills not used in the workplace. Second, training is likely to involve at least some acquisition of knowledge over a set time frame and in some cases use of distance education materials and multimedia. This supports the argument that ELL skills for training are likely to be more demanding than the workplace. Third, it is difficult to establish a clear view of what workplace ELL skills are and how one would improve or progress under these circumstances. If the employee is to aspire to the path of lifelong learning then this assumes ongoing development or possession of ELL skills to 'learn how to learn', including functional literacy skills, information literacy skills, research skills and critical thinking skills and an attitude to learning to make this choice of pathway accessible.

Areas for improvement

Both employers and employees identified use of computers, the ability to write legibly and spell and punctuate writing, and interpret graphical information as areas for improvement. The need for improvement in the area of interpersonal skills was also identified. This applied to skills underpinning teamwork and communication between employees and customers/supervisors, particularly when there is potential for conflict.

While the integration of ELL skills into training packages is sound policy and functional skills are comprehensively described in the NRS, additional information is required to enable more consistent effective delivery in keeping with organisational and technological changes occurring in the workplace and employer requirements. The ways ELL skills relate to other skills, and qualities employers identify as important to the job, also need to be addressed in terms of putting ELL skills into practice. There is a lack of a system view or an across-industry view of the scope, range and demands of ELL skills for both workplace performance and learning and in the context of workplace change and lifelong learning.

The need for greater emphasis on a mentoring process was suggested as being the best way to model workplace practices and create a positive learning environment in which ELL skills and other competencies could be developed. This was also seen as assisting employees to understand business operations and ultimately gain confidence in doing the work.

Findings

The results of the research show that employers place great emphasis on apprentices and trainees having adequate ELL skills in conjunction with a range of other organisational skills, knowledge of business operations as well as attitudinal related qualities they perceive as influencing workplace performance. From the employer perspective, ELL skills are associated first with the physical evidence resulting from workplace literacy-related tasks, including written job applications. Apprentices' and trainees' ELL skills are viewed as having a profound influence on workplace performance as well as learning. It was the general view that written texts, composed by employees primarily for an audience in the public arena, should be presentable in terms of legibility if hand written, accuracy of spelling and punctuation, sentence cohesion and meaning. Employers in workplaces where written texts such as inspection reports, service reports, quotations and correspondence to customers were at the centre of the business' operations placed high priority on such written texts fulfilling these criteria. Producing high quality documents was viewed as essential to successful business operations. Poorly written documents were seen as impacting on business in two ways. First, poor handwriting, inaccurate spelling and inadequate sentence construction were seen as detracting from the business' image which the employer wished to project to the public. Second, the resulting lack of clarity of meaning had the potential to expose businesses to unnecessary risks in terms of complaints about the work involved, including the risk of litigation. Similarly, where work related to reading information to carry out the work such as accurately fulfilling requests for goods, errors in reading comprehension also had the potential to cost the business extra money because goods had to be returned and replaced. From the employer perspective, employees were seen as needing to pay attention to, and demonstrate, adequate ELL skills along with a range of other skills and knowledge to carry out the work, progress in the job and follow a career path.

On the surface, the opinion of apprentices and trainees about their own ELL skills was extremely positive compared with that of employers. However, both employers and employees overall identified a need for improvement in the areas of interpreting graphical information, writing legibly, spelling and punctuation and using computers. Both apprentices and trainees acknowledged a need to improve their ELL skills and recognised that these skills were important for their work and continued learning. Perceptions of the adequacy of apprentices' and trainees' ELL skills differed between employers in different industry areas. Employers of apprentices were consistently more positive about these employees' ELL skills. Two factors may have contributed to this. First, the apprentices surveyed tended to have higher levels of education, including some completion of pre-vocational courses. Second, employers of apprentices are likely to invest more resources in their employees because of the longer time frame involved and so be more protective of this investment. Other differences showed employers were substantially more positive about their employees

involved in clerical work in terms of their ability to spell and punctuate writing compared with all other groups.

In keeping with the trends found in the literature review, employers were of the opinion that ELL skills demands were increasing in importance and broadening to incorporate information and technology demands.

The issues and outcomes involved in the practical application of ELL skills to apprentices' and trainees' learning and performance in the workplace are far reaching. The visibility of written texts makes skills associated with writing more prominent, but the need for effective oral communications skills and interpersonal skills is also at the core of workplace communications, both internal and external, and should not be underestimated. The ability to communicate effectively with supervisors, colleagues and customers and work in a team is an important part of work which relates to English language skills. However, effectiveness in practice does not equate to simply having speaking and listening skills. It involves other factors such as how the employee integrates and applies his or her skills, thinks critically, evaluates, uses initiative, organises time, conceptualises business operations and behaves strategically in terms of achieving the business goals. The ability to empathise and develop a rapport and network are also some of the essential but less tangible qualities.

Apprentices' and trainees' readiness to accommodate the ELL demands of the workplace also emerged as an important factor. The extent to which school ELL skills provide a foundation for the demands of the workplace in terms of performance and learning is not clear. Although employers clearly expect schools to prepare students for work in terms of literacy and numeracy, there is poor transfer of skills developed at school to those required in the workplace (Prince 1992). This is reinforced by other research which has shown school literacy involves 'reading to learn' compared with workplace literacy focussing on 'reading to do' (Diehl & Mikulecky 1980; Baylis, Caldwell & Nussbaum 1991). But from the perspective of employers and employees there seems to be little distinction, and literacy skills continue to be associated with reading and writing regardless of purpose. Thus, if employers and employees, trainers and policy-makers are to be aiming for a common goal then it seems these skill demands and the demands of learning need to be reviewed to make visible the skills' development pathway from school to work.

There is also a need to review these skills in the light of the demands of technology and the concept of a knowledge-based economy in the 'new world of work'. Impinging on this issue is the fact that there is considerable variation in the ELL demands of different jobs and different industry areas, yet there is no overarching framework to assist in conceptualising this view. While some jobs rely heavily upon oral communication skills, others may place heavy demands on clerical skills and/or reading, writing and evaluative skills, and/or use of computer software. Literacy skills for using software also vary according to the program. Similarly, some jobs also require the employee to apply his or her ELL

skills in a more technical or mathematical setting. In addition, workplace environments within which these skills are ultimately applied differ considerably. In some settings, demands placed on employees are dictated largely by the frequency of incoming telephone calls around which administrative duties must be organised. In other settings, work is highly focussed, predictable and occurs sequentially. Other employees find themselves carrying out their duties across a range of sites where the nature of the work requires on-the-spot decision-making. All these situations require employees to be able to automatically draw on their ELL skills according to the specific demands of the job. They also need appropriate higher order thinking skills and organisational skills to make best use of their ELL skills.

Besides ELL skill demands varying between jobs and industries, it was found that there may be a mismatch between the ELL skills required on the job and the ELL skills required to learn, particularly for jobs which have low level literacy demands. While it may be the ideal to maintain a balance between the two demands, it is likely that the ELL demands of some jobs have limited application for learning. The appropriateness of this ideal requires further investigation and is also significant to establishing how technology and information literacy fits into workplace performance and learning as well as establishing an approach to learning which is in keeping with the need to be adaptable, to reskill and takes account of the goal of lifelong learning. Adequate ELL skills were also seen as important for employees' career potential. This view was associated with both workplace demands and the ELL skills needed to acquire new knowledge.

The learning environment applicable to apprenticeships and traineeships also influences apprentices' and trainees' practical application of their ELL skills. The need for greater emphasis on a mentoring process was suggested as being the best way to demonstrate workplace practices and assist employees in understanding the business' operations and ultimately gain confidence and competence in doing the work. It was also found that there is likely to be variation in the way ELL skills are integrated into training packages for different industries and that variation is also likely to occur in the way training is delivered on the basis of different trainers and their different linguistic knowledge, and also the flexibility of delivery modes. The conduct of systematic audits of the ELL skill demands of the various industries and jobs would provide valuable information to help ensure consistency in integration and delivery of ELL skills in training.

Recent research (NCVER 1999) reports that most apprentices and trainees in 1997 had completed Year 11 or Year 12 and that they had successfully completed 65% of the modules in which they were enrolled. Although studying more intensively than the general VET population, these learning outcomes support the argument that apprentices' and trainees' performance is on a par with, or better than, that of the general VET group. The fact that most enrolments are at Certificate III Level provides some evidence of the level of demand for ELL

skills for learning, although trainees are more likely to be undertaking Certificate I or II courses. The potential advantages of the current flexibility in approach to delivery of training together with an increasing trend for VET courses to be delivered entirely on the job (Smith & Keating 1997) include greater apprentice/trainee motivation, more authentic learning experiences, more successful training outcomes, more opportunity to learn problem solving, and more practical understanding of the workplace business in terms of daily pressures and business operations. Alongside this is the implication that apprentices and trainees in this new system are likely to need to be more autonomous in the learning situation than ever before. It is likely they will need to be able to use computer technology, including internet and email, and be more dependent on their ELL skills than ever before to engage fully with the learning and performance demands of the workplace.

When apprentices and trainees are perceived as lacking in terms of adequacy of ELL skills, this has the potential to have very negative outcomes for all unless it is dealt with in a sensitive manner to avoid stigmatisation. Currently, there is a range of ways for employees to gain assistance to develop their ELL skills. There are also resources available to assist with the various aspects of planning and delivery of competencies relating to ELL skill demands. Policy and guidelines for developing training programs emphasise the need to identify and build on apprentices' and trainees' existing ELL skills. Developing functional literacy skills in the context of VET is seen as a specialist task. Without adequate ELL skills, apprentices and trainees are typically prevented from engaging in courses of learning which rely on print materials and/or demand extended reading and writing tasks. Employers require apprentices and trainees to demonstrate adequate ELL skills in their terms to be considered for promotion, particularly if the job places heavy demands on these skills.

Employers reinforced the view that when employees are unhappy about their ELL skills, they suffer from low self-esteem and lack confidence in doing their work. They viewed ELL skills as essential to carry out workplace duties, conduct business and contribute to customer service. These skills were seen as infiltrating every aspect of work impacting on the quality of interpersonal relations and applicable to all modes of communication. They were also seen as impacting on business costs and cost effectiveness of business operations. Employees' ability to adapt to the workplace was also seen as related to their ELL skills.

The future

The changing demands of work and the goal of lifelong learning implies a need to identify how ELL skills relate to this process of learning and approaches to training. Impacting on this is the increasing demand to be information literate both for learning and work. When considered along with the increasing move towards total on-the-job delivery of training and opportunity for on-line

learning, apprentices and trainees will require the skills to access a range of learning modes and resources, including CDROMS.

There are many references in the literature to groups of skills of different orders in addition to ELL skills, but the relationship between ELL skills required for learning and those required for performance is not clear. This relationship needs to be clarified such that if learning demands exceed the ELL skills required to do specific work, account may be taken of this by policy-makers, trainers and apprentices and trainees to ensure training addresses both learning and performance. Similarly, there needs to be a scan of the role and use of computers for both learning and performance on the job and across jobs to clarify the level of uptake of technology in learning and work and the associated ELL demands. This would allow identification of gaps and appropriate adjustments made in training in terms of policy and programs.

The importance of creating a positive workplace learning environment for apprentices and trainees is emphasised. Development and dissemination of, or access to, exemplar information to all stakeholders is desirable to enhance understanding of the New Apprenticeship pathway. A resource to model the learning/training situation which takes into account how ELL skills are applied in learning and performance should be developed. This would include how to create a positive workplace learning environment and focus on the role of a mentor, the role and development of interpersonal skills and provision of more intensive training on orienting employees to the notion of the business plan and business operations.

A need for research is identified, the outcomes of which would assist in ensuring that ELL skills are made explicit in training materials. This would contribute to streamlining the approach across industry areas. It would be necessary to include a comparative analysis of the ELL demands of the major job groups and the development of a user-friendly framework to link to the NRS. This would provide a guide for both training and assessment. It would need to keep faith with the policy of integrating ELL skills into training. It would also contribute to identifying ELL requirements for learning and performance to ensure a more comprehensive and systematic approach to ELL competency.

Further research is also required to provide comparative information on ELL skill development for workplace learning and performance, and for self-development and lifelong learning. Longitudinal case studies of apprentices/trainees across a range of industries to compare those beginning in school-based apprenticeships with those who enter from other backgrounds would bridge the current gap in learning and performance outcomes.

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Appendix to 'Apprentices' and trainees' English language and literacy skills in workplace learning and performance'

Appendix 1: List of survey items categorised in activity sets (employer version)

Teamwork	Workplace learning
1. Communicate effectively with colleagues.	1. Learn skills in the workplace.
2. Work cooperatively in a team to achieve a common goal.	2. Understand times and dates.
3. 'Give and take' to help achieve the team's goal.	3. Participate in training discussions.
4. Appreciate constructive criticism.	4. Find information
5. Take the viewpoint of others into account.	5. Understand on-the-job training needs.
6. Take responsibility for own work.	6. Begin learning in the workplace.
7. Prioritise their work.	7. Participate in off-the-job training needs.
8. Identify the cause of problems.	8. Discuss what they do or do not understand.
	9. Pay attention to detail.
	10. Use study skills.

Communication with customers and supervisors	Workplace understanding
1. Show sensitivity to customer needs.	1. Perform workplace duties.
2. Listen to supervisors.	2. Understand workplace processes and products.
3. Communicate effectively with customers.	3. Understand instructional guides and manuals.
4. Communicate effectively with supervisors.	4. Understand workplace health and safety rules.
5. Deal with misunderstandings and problems.	5. Understand key concepts and issues in the workplace.

Reading	Procedural activities
1. Read to carry out work duties.	1. Take telephone messages accurately.
2. Follow written instructions.	2. Follow verbal directions.
3. Read training materials.	3. Carry out sequences of activities.
4. Read and understand plans, diagrams and visual materials.	4. Put workplace health and safety rules into practice.

Writing	Mathematics, technology and media
1. Complete forms as required in the workplace.	1. Understand visual communication, e.g. signs, pictures, advertising material.
2. Write for workplace needs, e.g. notes, messages, letters.	2. Use computers as required.
3. Write legibly.	3. Do basic mathematical calculations (with or without a calculator).
4. Write for study needs.	4. Understand and use technical language.
5. Write for workplace learning needs.	5. Interpret graphical information.
6. Spell and punctuate their writing accurately.	

The report on which this chapter is based is published electronically on the world wide web at:
http://www.ncver.edu.au/research/proj/nr9017.pdf

The value of on-the-job traineeships

Josie Misko
Jan Patterson
Rosemary Markotic

Introduction

UP UNTIL VERY recently the majority of apprentices and trainees undertaking contracts of training in South Australia attended TAFE institutes or other private training providers for their off-the-job training. On-the-job training and experience were provided by employers in the workplace.

With the advent of New Apprenticeships more opportunities have been created for trainees to obtain all or the majority of their training (including the off-the-job component) from employers in the workplace. Before these contracts of training are entered into, however, certain conditions must be in place.

Today, any employer in South Australia who wants to provide an on-the-job traineeship must do so in conjunction with a registered training organisation (RTO). The RTO is involved in providing guidance and advice on training and assessment issues to employers, providing mentorship and support to trainees, monitoring the quality of the training that is delivered, and issuing the qualification. This means that the RTO must develop the training program in conjunction with employers and trainees and must not issue the qualification until it has determined that the trainee has achieved the required competencies. In addition, the RTO is required to make five visits to the workplace and to keep adequate records of the training program, the visits undertaken and the results of trainees. RTOs are also subject to an audit at least once during their registration.

These training arrangements have also provided employers with substantial monetary incentives that were paid at the commencement of a contract of training and on completion of a contract of training. From May 1998 onwards, there were also monetary incentives for those agencies that had encouraged employers to enter into this contract of training (generally a New Apprenticeship Centre).

During the last two years there have been a number of government-initiated investigations into the adequacy of these 'fully on-the-job' traineeships. These investigations have uncovered evidence of misuse of government funding, lack of structured training time given to trainees, and lack of appropriate skills development for the qualification that had been issued. There were also concerns that the incentives were being used to provide recognition of prior learning for existing employees, rather than for providing opportunities for employment and training for young people (Schofield 1999; Graham, G and Associates 1999; Schofield 2000; Smith 1999).

In 1999, the South Australian Government conducted a review of these on-the-job traineeships. It chose to focus on two specific traineeships—small business and office administration. The year in which the review was conducted were also the first year that 'user choice' was implemented in South Australia. Because the subjects providing information to the review were trainees who commenced a contract of training in 1998, it is important to understand the results in terms of the context in which these on-the-job traineeships were implemented in South Australia. In addition, there were changes to the contract of training requirements which placed a greater focus on the development of the training program.

In this chapter, we report on the benefits and disadvantages of undertaking on-the-job traineeships that were identified in this review.

About the review

Information from trainees, RTO mentors and employers was sought by means of questionnaire surveys. However, the responses to the employer questionnaire were gathered by in-person and telephone interviews. These complementary surveys asked respondents to report on how and when training and assessment were conducted. They also asked respondents to evaluate these traineeships in terms of the value of these traineeships for trainees. A total of 338 trainees, 26 RTO mentors involved in providing support to these trainees, and 126 employers responded to the surveys. This represented a 30% return rate for trainees, and a 77% response rate for employers.

RTO mentors reported on a total of 315 workplaces providing office administration traineeships and 485 workplaces providing small business traineeships. They provided mentoring services to a total of 566 trainees in office administration and 669 trainees in small business.

Findings

Practical skills and theory training

The most common way for students in office administration to learn the practical skills and theory for their jobs was for the supervisor to show trainees what to do, or to explain concepts to them. Where trainees were unable, or

prepared, to select one principal method for learning their practical skills or theory, the supervisor and other workers figured prominently in their responses. However, about a quarter of office administration trainees and just under a fifth of small business trainees reported that they learnt their theory by working through their manuals or learning materials on their own. There were also a few instances where trainees reported having to learn practical skills on their own, and where experienced trainees indicated that they already had the experience required. A small group of trainees indicated that they had done no theory.

Working through learning materials

When trainees were asked to indicate the time in which they did this training, the most common response for office administration trainees was that it happened during work time when they had a spare minute. This was the case for just under half (48.6%) of the trainees in this group. Although well under this percentage (37%) of small business trainees indicated this response, this was also their most common response. The next most common response, indicated by about a quarter of both groups (28.8% of office administration, 30% of small business), was that it happened either at home or in their own time after work. Very few (n=5 in total) said that they did this in their own lunchtime. Just over a tenth (12.6%) of office administration trainees indicated that they had a set time to do training during working hours, while this was the case for a marginally greater percentage of small business trainees (15.4%).

The value of on-the-job traineeships: A trainee perspective

Building skills for life and work

About three-quarters of the trainees in both groups believed that on-the-job traineeships helped to build skills for life, with substantially greater numbers of them strongly agreeing that this was so. However, about a tenth of office administration trainees and half this number of small business trainees disagreed that on-the-job traineeships helped to build these life skills.

Over 80% of trainees in both groups believed that on-the-job traineeships helped to build appropriate skills for work, with substantially greater numbers of them strongly believing that this was so. However, about a tenth of the trainees in office administration and half this number of trainees in small business indicated that they did not believe that on-the-job traineeships helped to build these skills (see table 1).

Adequate training assistance

Although about half of the trainees in both groups believed that they had received adequate assistance during training, trainees in office administration were marginally more likely than those in small business to strongly agree that

this was the case. Similar percentages (about a fifth of trainees) in both groups were either neutral or disagreed that this was the case. Over two-thirds of the trainees in both groups believed that on-the-job traineeships provided adequate preparation for their occupations. Once again a similar proportion (about 20%) in both groups provided a neutral rating (see table 1).

Adequate learning environments

Just over two-thirds of the trainees in both groups believed that on-the-job traineeships had provided an environment which was safe for learning, with strongly agree ratings outperforming the rest for both groups. About a tenth of trainees in both groups disagreed that this was the case. However, about a quarter of those in office administration and just under a fifth of those in small business provided a neutral rating.

Trainees provided similar ratings to the item which asked them to rate the extent to which the environment allowed them to achieve their potential (see table 1).

Accurate assessments

Just under two-thirds of both groups of trainees believed that on-the-job traineeships provided accurate assessments. However, those in office administration were two times more likely than those in small business to strongly believe that this was so. Almost a fifth of trainees in small business did not agree that accurate assessments were provided. Substantially fewer trainees in office administration provided a disagree rating (see table 1).

Increased job opportunities

Over three-quarters of the trainees in both groups believed that on-the-job traineeships provided trainees with increased job opportunities, with substantially greater numbers strongly believing that this was so. Similar numbers from both groups provided neutral or disagree ratings.

Where almost 80% of the trainees in office administration believed that these traineeships provided a good start for further studies, only about 70% of those in small business agreed that this was so. However, for both groups there were more trainees who strongly believed that this was so (see table 1).

Financial benefits

Just over two-thirds of the trainees in office administration believed that on-the-job traineeships provided value for money for employers, with trainees being twice as likely to strongly believe that this was the case. The ratings provided a similar trend for trainees in small business. However, small business trainees were slightly more likely than trainees in office administration to strongly believe that these traineeships provided value for money for employers. Where

almost a quarter of trainees in office administration could not make up their mind one way or the other, the figure was about ten percentage points lower for trainees in small business.

In addition, over three-quarters of the trainees in both groups believed that traineeships provided opportunities for trainees to earn while they learn. However, in this case trainees were far less likely to return a strongly agree rating. Trainees in office administration were marginally more likely than trainees in business administration to return a strongly agree rating (see table 1). (In table 1 and all subsequent tables, totals may not add to exactly 100% due to rounding.)

Table 1: Trainee ratings of perceived benefits of on-the-job traineeships

On-the-job traineeships help trainees by providing:	Office administration						Small business					
	*SA	*A	*NT	*Dis	*NR	*T	*SA	*A	*NT	*Dis	*NR	*T
• skills for life	44.1	30.6	15.3	8.1	1.9	**100**	44.9	32.2	16.3	4.4	2.2	**100**
• appropriate skills for work	55.0	28.8	7.2	8.1	0.9	**100**	50.2	32.2	11	4.0	2.6	**100**
• adequate assistance during training	33.3	26.1	19.8	19.8	1.0	**100**	26.0	26.4	22	21.6	4.0	**100**
• adequate preparation for their occupations	34.2	37.8	19.8	7.2	1.0	**100**	32.2	32.6	22.9	9.2	3.1	**100**
• a safe environment for learning	41.4	25.2	25.2	6.3	1.9	**100**	37.9	32.2	19.4	8.4	2.1	**100**
• the environment to achieve their potential	31.5	34.2	18	14.4	1.9	**100**	35.2	30.8	21.6	9.7	2.7	**100**
• increased job opportunities	46.8	35.1	11.7	5.4	1.0	**100**	45.4	33.5	12.3	6.2	2.6	**100**
• a good start for further studies	45.0	34.2	11.7	3.6	5.5	**100**	37.4	33.5	17.6	7.9	3.6	**100**
• value for money for employers	45.0	22.5	23.4	8.1	1.0	**100**	48.9	26.4	14.5	7.4	2.8	**100**
• increased earning potential for trainees	25.2	43.2	20.7	10.3	0.6	**100**	23.3	37.4	24.7	11.8	2.8	**100**
• opportunities for trainees to earn while they learn	57.7	20.7	12.6	8.1	0.9	**100**	48.9	26.4	14.5	7.5	2.7	**100**

Note: *SA = Strongly Agree, A = Slightly Agree, NT = Neutral, Dis = Disagree, NR = No report, T = Total

Trainee satisfaction with on-the-job traineeships

To gauge trainee satisfaction with on-the-job traineeships, trainees were asked to provide ratings of the extent to which they had enjoyed doing their traineeships. They were also asked to provide information on how strongly they would recommend this form of traineeship to others who were deciding how to do their training. Well over two-thirds (71.5% office administration, 69.6% small business) of the trainees in both groups either strongly agreed or slightly agreed that they had enjoyed this form of traineeship and would recommend this to others. However, office administration trainees were substantially more likely to provide a strongly agree rating than were those in small business.

Just under a fifth of those in office administration and just over a tenth of those in small business indicated that they had not enjoyed doing their traineeships.

When trainees were asked to indicate the extent to which they would recommend these traineeships to others, almost three-quarters (71.5%) of those in office administration and just over two-thirds (65.2%) of small business trainees indicated that they would recommend an on-the-job traineeship to others. Of these, the great majority strongly agreed that they would do so. However, just over a tenth of the trainees in both groups reported that they would not recommend it to others.

Perceived advantages

Trainees were asked to describe the greatest advantage of doing an on-the-job traineeship. About three-quarters of all trainees provided responses to this question. The most frequent advantage reported by office administration trainees was related to their opportunity to gain qualifications. This was followed by the opportunity it had given them to obtain employment in the short term and in the future. The most frequent advantage reported by small business trainees related to the occupational skills they were able to develop during the traineeship, followed by the opportunity to work full time, secure a job or obtain a job in the future. Details on the advantages reported by trainees are reported in table 2.

Table 2: Advantages of on-the-job traineeships as reported by trainees

	No. of cases			% of cases	% of responses
	Office admin.	Small business	All		
Opportunity to obtain full-time job	27	58	85	25.1	26.5
Occupational and personal skill development	18	55	73	21.6	22.7
Opportunity to gain qualifications and recognition	27	34	61	18.0	19.0
Increased experience in work	13	21	34	10.1	10.6
Improved understanding of industry and occupation	9	19	28	8.3	8.7
On-site training	6	10	16	4.7	5.0
Social benefits (developing positive relationships)	3	5	8	2.4	2.5
Opportunity for further training	2	4	6	1.8	1.9
Employer benefits only	0	4	4	1.2	1.2
Uniform standards	0	2	2	0.6	0.6
Resumé	0	2	2	0.6	0.6
Mutual benefits for employers and trainees	0	2	2	0.6	0.6
Total	**105**	**216**	**321**		**100.0**

The value of on-the-job traineeships: An employer perspective

Information from employers support the positive evaluations provided by trainees. Their responses also provide a strong endorsement of the ability of on-the-job traineeships to provide a safe and adequate learning environment for trainees to develop skills for life and work and for further studies. Although employers generally believed that accurate assessments were possible under this system, they were less likely to strongly agree that this was so. They generally believed that on-the-job traineeships provided them with value for money. However, almost a fifth disagreed or strongly disagreed that this was the case. Their disagreements generally related to the amount of time and effort they had to put in to make the traineeship successful. However, employers were more likely than trainees to agree that on-the-job traineeships provided value for money for employers. These results are provided in table 3.

Table 3: The extent to which employers value on-the-job traineeships: Percentage of respondents

On the job traineeships:	Strongly agree %	Agree %	Neutral %	Disagree %	No report %
• help trainees build skills for life	56.3	31.0	7.1	3.8	0.8
• increase job opportunities for trainees	59.5	27.8	7.9	4.0	0.8
• when completed increase a trainee's earning potential	42.9	36.5	15.1	4.8	0.8
• provide a good start to further studies	53.2	31.0	10.3	3.2	2.4
• help trainees build appropriate skills for work	58.7	33.3	6.3	0.8	0.8
• provide the environment for trainees to achieve their potential	47.6	30.2	16.7	4.8	0.8
• provide trainees with adequate preparation for their occupations	46.8	34.9	12.7	3.2	2.4
• provide trainees with a safe environment for learning	53.2	28.6	11.9	4.0	2.4
• provide trainees with accurate assessments	33.3	35.7	23.0	6.4	1.6
• provide trainees with adequate assistance during training	43.7	35.7	14.3	5.6	0.8
• provide value for money for employers	51.6	25.4	11.4	19.3	0.8

Recommending on-the-job traineeships to other employers

When employers were asked whether they would recommend these traineeship programs to other employers who are deciding how to do their training, well over four-fifths (84.2%) replied that they would do so. Over two-thirds of these provided strong agreement for the proposition. When compared to trainees' responses to the same issue, employers were more strongly in favour of recommending the training to others. Where just over two-thirds of the trainees in both groups were in favour of recommendation, the figure for employers was substantially higher. Only 6.4% of employers reported that they would not recommend these programs to others.

Perceived advantages for employers

Employers were asked to describe the advantages they believed that they derived from on-the-job traineeships. The most frequently reported advantage was the opportunity for the employer to control the training and train according to business needs. Small numbers of employers believed that they derived few or no advantages (see table 4).

Table 4: Advantages derived from employers from on-the-job traineeships as reported by employers

	No. of respondents	% of respondents	% of responses
Allows employer to control the training and train according to business needs	90	71.4	54.9
Increased skills	19	15.1	11.6
Trainee available on site at all times	14	11.1	8.5
Creates job opportunities and vacancies	12	9.5	7.3
Provides employer with assistance for work	7	5.6	4.3
Cost effectiveness	6	4.8	3.7
None or few advantages	5	4.0	3.0
Support provided for training	2	1.6	1.2
Time saving	2	1.6	1.2
Provides employer with opportunity to be involved	2	1.6	1.2
Responsibility for training shared with RTO & trainee	1	0.8	0.6
Increase in self-esteem for employer	1	0.8	0.6
Fulfilment obtained from training	1	0.8	0.6
Improvement in relationships	1	0.8	0.6
Traineeship program a good scheme	1	0.8	0.6
Total	**154**		**100.0**

Perceived advantages for trainees

Employers' responses were also provided in terms of advantages for trainees. For trainees, the most commonly identified advantages were reported by employers in terms of increased skills. This was identified by over a quarter of all respondents. The next most frequently identified advantage was related to the opportunity for trainees to gain employment. The third most frequently identified advantage was related to opportunities for on-the-job and hands-on training, and training which was industry- or enterprise-specific. Only one employer indicated that there were no advantages for trainees. A breakdown of this information is provided in table 5.

Table 5: Major advantages derived by trainees from on-the-job traineeships as identified by employers

	No. of respondents	% of all respondents	% of all responses
Increased learning and skills	33	26.2	37.5
Opportunity to experience work and gain employment	18	14.3	20.5
On-the-job training	14	11.1	15.9
Industry-specific training	14	11.1	15.9
Ability to earn money while learning	3	2.4	3.4
Increased confidence	2	1.6	2.3
Increased experience	1	0.8	1.1
Flexibility of training arrangements	1	0.8	1.1
Opportunity to obtain certificate	1	0.8	1.1
No advantages	1	0.8	1.1

Table 6: The extent to which RTO mentors value on-the-job traineeships: Percentage of respondents

On the job traineeships:	Strongly agree %	Agree %	Neutral %	Disagree %
• help trainees build skills for life	41.7	37.5	16.7	4.2
• increase job opportunities for trainees	41.6	33.3	25.0	
• when completed increase a trainee's earning potential	20.8	25.0	29.2	8.3
• provide a good start to further studies	29.2	33.3	25.0	12.5
• help trainees build appropriate skills for work	54.2	29.2	12.5	4.2
• provide the environment for trainees to achieve their potential	4.2	45.8	37.5	12.5
• provide trainees with a safe environment for learning	12.5	50.0	29.2	8.3
• provide trainees with accurate assessments	29.2	41.6	8.3	20.8
• provide trainees with adequate assistance during training	25.0	25.0	12.5	37.5
• provide value for money for employers	83.3	8.3	4.3	4.3

The value of on-the-job traineeships: An RTO perspective

RTO respondents were also asked to indicate the extent to which they believed on-the-job traineeships helped trainees to build skills for life and work and prepared them for further studies. Their responses showed that they generally supported the positive opinions of trainees and employers about the ability of traineeships to build skills for life and work. However, they were less likely to agree that they increased a trainee's earning potential. In addition, more than a third did not believe that on-the-job traineeships provided trainees with adequate assistance during training. They were also more likely to believe strongly that these traineeships provided value for money for employers (see table 6).

Perceived advantages

Respondents were asked to identify the major advantages of on-the-job traineeships. The most frequently reported advantage related to increased opportunities for a full-time job or the possibility of further work for trainees, and development of personal and occupational skills for trainees.

Table 7: Perceived benefits of on-the-job traineeships as reported by RTO mentors

	Office admin.	Small business	All	% of cases	% of responses
Creates jobs for trainees	5	10	15	62.5	19.0
Skills development for trainee	3	9	12	50.0	15.2
Development of enterprise-specific skills	5	4	9	37.5	11.4
Improvements in self-esteem, morale, motivation	4	5	9	37.5	11.4
Flexibility in training	5	3	8	33.3	10.1
Recognition of skills	5	1	6	25.0	7.6
Work-related experience	2	2	4	16.7	5.1
Trainee available to employer at all times	2	2	4	16.7	5.1
Provides assistance for further studies	2	1	3	12.5	3.8
Incentives for employers	1	1	2	8.3	2.5
Good learning strategy	1	1	2	8.3	2.5
Allows trainees to develop potential	1	1	2	8.3	2.5
No fees involved	1	1	2	8.3	2.5
Investment for employer and trainee		1	1	4.2	1.3
Total	**37**	**42**	**79**		**100.0**

Perceived disadvantages

Problems and difficulties for trainees

Over three-quarters of the trainees in both groups indicated that they had rarely or never experienced any difficulties in obtaining assistance with their learning from their workplace supervisors. A greater proportion indicated that they rarely or never had any difficulties in understanding the learning resources used for their traineeship. However, the proportion of trainees indicating that they rarely or never experienced difficulties with finding time to do their studies was slightly lower for both groups. Just over a quarter of the trainees in office administration reported always or often experiencing difficulties with finding time to do their studies. The figure for small business trainees was marginally higher.

Trainees were also asked to describe if they had experienced any other problems during their traineeships. Just over 70% of trainees in both groups had not experienced any other problems. Just over a quarter of trainees in office administration (27.9%) and about the same proportion (28.6%) of trainees in small business reported a variety of problems. For both groups, the most commonly reported problem related to inadequate or non-relevant training, followed by insufficient time available to do the training. The third most frequently identified problem for both groups related to not supportive or unfair treatment from employers. However, it is important to understand these data in terms of the small numbers of trainees that have actually identified specific problems.

When trainees reported the actions they had taken in dealing with the problems they had encountered during their traineeships, the most frequently reported activity for small business trainees was to speak to their RTO mentor. The second most frequently reported action was to speak to the workplace supervisor or employer. This pattern was reversed for trainees in office administration. For all trainees, problems discussed with employers or RTO mentors tended to deal with training or assessment issues. However, industrial relations problems involving injury, dismissal or other workplace problems were taken up with appropriate industrial relations and government bodies. Once again, it is important to view this information in terms of the small numbers of trainees who had reported problems in the first place.

Table 8: Problems and difficulties experienced by trainees in their t

	Office administration				
It has been difficult to:	Always	Often	Rarely	Never	N
• get assistance with my learning from my supervisor	7.2	12.6	27.9	49.5	
• understand learning resources	2.7	8.1	43.2	44.1	
• find time to do my studies	9.9	18.9	41.4	27.9	

raineeships

		Small business					
o report	**Total**	Always	Often	Rarely	Never	No report	**Total**
2.7	**100.0**	7.0	15.4	30.0	45.4	2.2	**100.0**
1.8	**100.0**	3.5	11.0	40.5	37.9	7.0	**100.0**
1.8	**100.0**	14.1	18.9	25.1	36.6	5.3	**100.0**

Problems and difficulties for employers

Although the great majority of employers reported rarely or never experiencing difficulty with obtaining accurate information about the traineeships, about a tenth reported always experiencing these difficulties, and just under a fifth reported that they often experienced these difficulties. The numbers of employers always or often experiencing difficulties in allocating time to developing the training program was far greater. Here, just over a third of the employers indicated often experiencing difficulties, and about just over 5% indicated that they always experienced difficulties. Although the great majority of employers rarely or never experienced problems in helping trainees with training materials, or ensuring that trainees could repeat the skill successfully in a variety of situations, there were still about 20 employers who indicated always or often experiencing such problems. A marginally greater percentage indicated that they had difficulties in ensuring that the test used to assess competence really gives an accurate measure of the skill (see table 9).

Table 9: Difficulties experienced by employers in on-the-job traineeships

It is difficult to:	Always %	Often %	Rarely %	Never %	Not reported %
• obtain accurate information about on-the-job traineeships	8.7	19.0	32.5	35.7	4.0
• allocate time to develop the training program	5.6	30.2	37.3	25.4	1.6
• get time to help trainees with problems in understanding the learning materials	3.2	15.1	36.5	42.9	2.4
• ensure the trainee can repeat the skill successfully in a variety of situations	5.6	11.9	35.7	45.2	1.6
• ensure the test used to assess competence really gives an accurate measure of the skill	4.8	19.8	31.0	38.9	5.6

RTO reports

Respondents were asked how frequently they experienced difficulties in scheduling visits for trainees, developing the training program with employers, helping trainees with problems in understanding learning materials, and ensuring reliable and valid assessments. Their responses show that for this group of mentors there are between 60 and 94 workplaces which consistently do not provide appropriate time for trainees to meet with mentors or allocate time to jointly develop the training program. This represents between 9% and 15% of the number of 604 workplaces for which ratings were provided. A similar

percentage of workplaces also consistently provide difficulties for RTOs to ensure reliable and valid assessments. Numbers of workplaces which always, often, occasionally or never provide difficulties for RTO mentors are reported in table 10.

Table 10: The frequency with which workplaces provide difficulties for RTO mentors in on-the-job traineeships—% of workplaces

It is difficult:	Always	Often	Occasionally	Never	No report	Total
• to get employers to provide appropriate time for trainees to meet with me	1.3	8.6	50.3	38.6	1.2	**100.0**
• to get employers to allocate time to develop the training program	2.0	13.6	46.5	31.8	6.1	**100.0**
• for me to find time to make regular visits to trainees	0.5	0.5	1.8	90.2	7.0	**100.0**
• to get time to help trainees with any problems they may be having with understanding learning materials			37.9	57.6	4.5	**100.0**
• for me to ensure reliability of assessments	0.8	12.7	15.4	71.9		**100.0**
• for me to ensure validity of assessments	0.8	11.8	42.2	42.9	2.3	**100.0**

Disadvantages of doing on-the-job traineeships

Trainees

In addition to being asked to report any specific problems they had experienced during their traineeships, trainees were also asked to describe any disadvantages of doing on-the-job traineeships. Just over half (51.7%) of the trainees in office administration and well over half (59%) of trainees in small business provided a response to this question. The most frequently reported disadvantage for both groups was related to insufficient pay. This was followed by the lack of time to devote to training. Also frequently reported was inadequate or no training being delivered and dissatisfaction with the training that was received. A breakdown of these data is presented in table 11.

Table 11: Disadvantages of on-the-job traineeships as perceived by trainees

	No. of cases Office admin.	No. of cases Small bus.	No. of cases All	% of responses
Inadequate training	29	41	70	31.3
Low pay	20	49	69	30.8
No problems	5	26	36	16.1
Employer	4	12	16	7.1
No job	2	10	12	5.4
RTO mentor	1	6	7	3.1
Assessment and recognition	2	3	5	2.2
Personal	1	3	4	1.8
No external courses	2	1	3	1.3
Quality of qualifications obtained	1	1	2	0.9
Total	**67**	**152**	**224**	**100.0**

Employer reports

Employers were asked to report disadvantages of these on-the-job traineeships which were experienced by employers and trainees. About a third of all respondents believed that there were no disadvantages for trainees. Disadvantages that were identified dealt with finding the time to do the training, narrowness of the training they received, and the lack of structured training (see table 12).

Table 12: Disadvantages for trainees in on-the-job traineeships as reported by employers

	No. of respondents	% of survey respondents	% of all responses
No disadvantages	39	31.0	36.1
Time to put aside for training	18	14.3	16.7
Training received by trainee is narrow	15	11.9	13.9
Quality of training	7	5.6	6.5
Risk of work taking priority over training	6	4.8	5.6
Program requires motivation and ability	4	3.2	3.7
Low wages for trainees	4	3.2	3.7
Lack of structured training	3	2.4	2.8
Lack of interaction with other trainees	3	2.4	2.8
No guarantee of job for trainee	2	1.6	1.9
Inadequate service of RTO	2	1.6	1.9
Trainee locked into 12-month program	1	0.8	0.9
Program not specific to industry	1	0.8	0.9
Diversity in standards	1	0.8	0.9
Completing program	1	0.8	0.9
Abuse of system	1	0.8	0.9
Total	**108**		**100.0**

RTO reports

The major disadvantages identified by RTO respondents were varied. However, the concerns of over two-thirds of these mentors related to the narrowness of training that attached to the trainee being exposed to one site; well over a third indicated concerns with the lack of training commitment displayed by employers (see table 13).

Table 13: Major disadvantages of on-the-job traineeships as perceived by RTO mentors

	Office admin.	Small business	All	% of survey respondents	% of all responses
Lack of trainee exposure to comprehensive or broad range of skills, habits and work sites	11	6	17	65.4	39.5
Lack of commitment to training by employer	4	6	10	38.5	23.3
Unsuitable employers		3	3	11.5	7.0
Lack of interaction with other trainees	2	1	3	11.5	7.0
Lack of further jobs for trainees		2	2	7.7	4.7
Knowledge base limited by resources available		2	2	7.7	4.7
Insufficient training		2	2	7.7	4.7
Diversity of standards is a problem	1	1	2	7.7	4.7
Lack of time provided for training	1		1	3.8	2.3
Devaluing of qualification through lack of consistency between workplaces		1	1	3.8	2.3
Total	**19**	**24**	**43**		**100.0**

Employment outcomes

Trainees were asked whether they believed that their traineeships would lead to future employment in the occupations with which they were currently involved. Over two-thirds of the trainees in office administration and well over half of those in small business believed that the traineeships would lead to future employment in the occupation.

Trainees in office administration who did not have a job with the same employer before commencing their traineeships were far more likely to believe that their traineeships would lead to future employment in the occupation than were trainees in small business (office administration 80%, small business 58.3%). Trainees were also asked whether they had been offered a job with the company once their training was over. About two-thirds of the trainees in office

administration (62.2%) and in small business (63.9%) who had not been employed with the same employer before they had started their traineeships had been offered a job. However, just over a quarter (28.9% office administration, 29.6% small business) had not been offered a job. Trainees who had not been made an offer of employment were also asked if they thought they would get an offer of employment once their training was over. A total of ten trainees (two in small business and eight in office administration) replied that they believed they would receive an offer once their traineeships were over.

Discussion and conclusions

These findings provide insights into how trainees, employers and RTO mentors evaluate their experiences with on-the-job traineeships. These findings are then used to suggest opportunities for improvement.

A realistic and positive experience for trainees

It is clear that in the majority of cases trainees were positive about their experiences in on-the-job traineeships, with many strongly believing in the value of these traineeships. They believed that these provided them with opportunities and the environment to develop life and work skills, prepare for occupations, achieve their potential and obtain jobs. In addition, trainees, and especially those in office administration, also generally believed that the traineeships provided a good start for further studies. Although the majority of trainees agreed that they were given adequate assistance during their training, they were less likely to strongly agree that this was the case.

When they were asked to provide self-reports on the advantages of on-the-job traineeships, trainees in both groups reported advantages which generally related to the opportunity to experience full-time employment or prepare for future employment. The opportunity to 'earn while you learn' was a frequently recurring theme.

These findings show that a hands-on approach to training has an important contribution to make to the development or improvement of workplace skills for new and experienced workers. It also shows that they appreciate the opportunities that this approach brings.

Most importantly, it constitutes a common-sense approach to training based on providing trainees with what educators have called an 'authentic' or 'situated' learning experience. This mainly consists of learning derived from repeated practice of day-to-day tasks that are required in workplaces, and from the experience of workplace personnel. Being engaged in 'operational' or on-line production activities and services also provides trainees with an understanding of 'real' tasks, 'real' deadlines and 'real' customers, thereby providing them with a 'real' role in contributing to the survival of the business or enterprise. It is for these reasons that such traineeships should be continued.

Coping with workplace or learning problems

Although trainees were generally positive in their evaluations of the work and life-skill benefits provided by on-the-job traineeships, there was a minority who had experienced difficulties with their training and with colleagues in the workplace. However, it is interesting to note that very few trainees reported problems that they found to be insurmountable. When trainees experienced any major problems with training or assessment issues, they mostly talked these over with their supervisors or RTO mentors. Major industrial problems like pay or compensation issues were generally referred to governmental or industrial authorities. Some trainees also reported coping as best they could, saying nothing, or talking about any problems they were experiencing with family and friends. In most cases problems were resolved so that the trainee could make appropriate progress through the traineeship.

Trainees also provided other information to show that in the main they rarely or never experienced problems in obtaining assistance when required, or in understanding the learning materials that were provided. This means that workplace supervisors and employers or other colleagues are generally on hand to help trainees solve any problems they may be having. It also means that learning materials are not providing the great majority of trainees with any significant problems.

These are encouraging findings. They show that both employers and RTOs have entered into the spirit of these traineeships—that is, providing on-site support and assistance for trainees as they progress through their programs. This is not to say that there is no room for improvement. Because there are certain isolated instances of trainees not receiving assistance when they require it or finding problems with their learning materials, it is important that supervisors and RTO mentors be aware of their roles in providing assistance and support. It is also important that all supervisors understand their training obligations before they enter into the contract of training.

Allocating time for structured training

It is also evident that about a quarter of the responding trainees always or often experienced difficulties in finding the time required for training. This may be because these trainees may understand training to mean the training that must be done in completing exercises or written problems outlined in their training manuals. As a result, they may not perceive as training the practical training they are obtaining by being involved in day-to-day operational activities. However, completing the work outlined in training manuals is also part of the training program. If trainees believe that operational obligations preclude them from allocating time during work hours to sit down and go through their training manuals then this is a cause for concern.

The findings also show that trainees are, in the main, expected to do this training in their own time or at work when they have a spare minute. Few trainees in both programs reported that they had a set time in which to do their training. It is here that it is important to impress upon employers that time for structured training should be built into the weekly work timetable, and be adhered to. This is not to say that this set time cannot be changed when urgent and important contingencies arise, but it is to say that employers should be committed to providing a set time at work for trainees to go through their training manuals. However, this does not mean that trainees should not be expected to do some homework during their own time.

If we are serious about on-the-job training then it is important that expectations for training support in terms of time and support be spelled out to employers and RTO mentors prior to the signing of the contract of training. Ways of flexible timetabling can also be explained at that stage.

It is important to ensure that all parties to a contract of training are aware of their obligations. It is also important for those who are promoting the use of on-the-job traineeships to trainees and employers to be fully aware of their responsibilities to provide the right information.

Customising the training to suit individual workplaces

When trainees were asked to report any major problems, there was a small group of trainees who complained about non-relevant or inappropriate training. A few trainees used this as an opportunity to complain about the knowledge or experience of their supervisor, or what they perceived to be unfair treatment. Although these problems were reported by a small number of trainees, they may represent a group of workplaces in which the capacity of the employer to deliver the training may not have been rigorously evaluated. In addition, it could be that employers have not themselves had adequate training on how to provide training or deal with employees in general.

Information from RTO mentors showed that in a number of workplaces they often or always had difficulties with getting employers to allocate sufficient time to developing the training program. If there is not enough time devoted to developing this program then there is the danger that the training that is delivered may either be inappropriate or inadequate. It is essential, however, to make sure that RTOs and employers are acutely aware of the importance of providing time for developing training programs.

It is also important for RTOs to develop close relationships with workplaces in their care so that employers will feel able to discuss their training problems with them. In this way, they can sit down with employers to re-negotiate programs that are not working, and implement some remedial procedures. There may also be opportunities for RTOs to increase the amount of off-site training that can be delivered.

Remuneration

It is clear that the wages that trainees receive are perceived by many trainees to be low or insufficient. This is especially the case for those trainees who have family commitments. A discounted wage because of its cost-effectiveness for employers may be, in part, a critical factor in influencing employers to engage in a traineeship in the first place. As a result, it is this employer engagement that enables a formerly unemployed trainee to obtain 12 months full-time employment and experience. Keeping in mind that obtaining this 12 months full-time employment figured prominently among the benefits identified by trainees, the problem still remains. The discounted wage, however, is in part based on trainees spending paid work time in structured training. However, this becomes a problem when structured training is not provided in work time. The question is how to keep traineeships attractive enough for employers to want to become involved, and how to provide adequate wages and training time for trainees so that they are not feeling exploited or cheated in some way.

An entrée into full-time jobs

Because about two-thirds of trainees who were not formerly employed with the same employer had been offered jobs with the same company once the traineeship was over, we can say that these traineeships provide an effective entree to employment for trainees. This is indeed a positive and welcome finding. As well as providing an encouraging sign about the effectiveness of such training programs in allowing employers to get a first-hand look at prospective employees, it also allows trainees to come off the unemployment queues in an authentic manner—that is, the traineeships are being used to provide real jobs in the long term.

However, the traineeships are not always successful in this way for all trainees. It is for these trainees that further opportunities for involvement in the world of work through extended structured training will need to be explored. The promotion of consecutive contracts of training to trainees as they progress through increasingly higher level training may be one way to provide continued attachment to work and thereby to training. In this way, the trainee is provided with opportunities for increased and sustained practice of skills required for particular occupations. Benefits of this approach will be felt in three major ways. First, it maintains the connection of the trainee to the world of work and to the concept of working for wages. Second, it takes trainees off social benefits and the social stigma that this brings. Third, it provides trainees with a history of work and experience in an occupation that can help to strengthen a trainee's resumé, which can be presented to other employers and so improve their chances for further employment.

The way forward

The findings from trainees, employers and RTO mentors show that, in the main, the trainees in office administration and small business benefit from the opportunities provided by their involvement in on-the-job traineeships. However, the findings also show that there are still opportunities for improvement. These opportunities for improvement relate to the adequate preparation of employers, trainees and RTO mentors prior to commencing the training program, re-visiting of policy about consecutive contracts of training and broadening the range of training experiences available to trainees.

Adequate induction strategies

Induction programs structured to provide participants with an overview of training obligations and the critical things for them to look out for when setting up training programs will help to minimise the negative aspects of on-the-job traineeships. These preparation programs would especially relate to how to identify modules that should be considered, or skills that are essential and desirable for trainees to learn, the appropriate use of recognition of prior learning processes and the allocation of adequate time for structured training. Guidelines for RTOs to establish frameworks which will help them to improve their monitoring of workplace training delivery and to help employers develop training and assessment strategies which will help to deliver relevant and appropriate training, and reliable and accurate assessments would be particularly important. RTOs should also encourage employers to consider off-the-job training interventions in areas where they are having problems delivering the training and conducting assessments.

In addition, trainees should be assisted to understand what their obligations are in the training process. This may include informing trainees that they must also be committed to learning new skills and to reminding their employers of the need to regularly allocate time to structured training during work hours.

Revisiting policies for consecutive contracts of training

As already noted, the promotion of consecutive contracts of training to trainees as they progress through increasingly higher level training may be one way to provide trainees with continued attachment to structured training and to the world of work. In this way, the trainee is provided with opportunities for increased and sustained practice of skills already learnt and introduction to new skills that are required for progression in a particular industry or occupation.

Broadening the range of training experiences

It is clear that RTO mentors and some employers are concerned that the trainee in these traineeships will only develop a narrow range of skills and experiences. Maintaining a balance between training in enterprise-specific skills and those

required by the industry or occupational group will be a challenge. There is no reason that opportunities for trainees to spend training time or work experience with other employers or in other related industries cannot be built into the training program.

Concluding remarks

The findings from trainees show that in South Australia there are encouraging signs about the ability of on-the-job traineeships in these two programs to provide relevant and appropriate skills training and experience, and job opportunities for trainees. However, there are still opportunities for further improvement.

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Training for skilled trades in Australia, 1980–2000: Training reforms

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Aims

This study examines trends in occupational mismatch in the metal, building, vehicle and electrical trades and questions whether the process of award restructuring which began in the late 1980s has created incentives for unskilled blue-collar workers to pursue skill-based career paths in the trades. In so doing, it has been necessary to examine the reasons for high attrition rates by qualified workers from their trade, as well as the motives behind employers' decisions to hire unqualified workers to do trade work. The study focusses on the metal, building, electrical and vehicle trades, which account for over two-thirds of the traditional trades. As such, it is primarily concerned with the male labour market.

The analysis for this study has used secondary data sources to detect trends in training rates, levels of attrition and the amount of upgrading. The method of analysis used is not definitive, but rather indicative. By combining gross trends and comparisons in the data with deductive reasoning, the analysis can only suggest causal relationships in the labour market.

To assess the effect of policy and institutional changes instigated during the late 1980s, a lengthy post-change review period such as ten years is required. Accordingly, it is pre-mature at this time to undertake a labour market assessment of the New Apprenticeship initiatives that began nationally in January 1998. The analysis concentrates on changes to the training system made during the late 1980s and early 1990s.

The term 'apprenticeship' in this report is considerably narrower than current National Centre for Vocational Education Research (NCVER) usage and refers to only the traditional three- to four-year apprenticeship in the manual trades.

Labour in the skilled trades, 1971–1996

Despite strong indicators of high vacancy rates for most types of skilled tradespeople throughout the 1950s, 1960s and 1970s, emerging labour market data of the 1970s revealed concurrent large numbers of qualified tradespeople working in jobs that required skills well below trade level. This situation operated simultaneously with very high levels of unqualified people working as tradespeople.

In the metal, building, vehicle and electrical trades, about four in ten men working as a skilled tradesman did not have a trade certificate in 1971. By 1996, this had fallen to 2.5 in ten for the metal, vehicle and electrical trades and three in ten for the building trades (see table 1).

A minority, albeit a growing one, of qualified tradesmen have been moving over time into 'higher' managerial or technical occupations where their trade skills are likely to be used to some extent. However, many qualified tradesmen are also leaving their trades to take semi-skilled or unskilled manual and service sector work. According to table 2, 17.9% of metal, vehicle and electrically qualified tradesmen and 14.4% of qualified building tradesmen were working in these less-skilled jobs in 1996. A further 8–13% were working in clerical and sales jobs where the relevance of trade skills is unclear. The percentage of trade-qualified men working in a less-skilled job compares with 7.4% for tertiary-qualified men.

Only limited survey evidence exists on the reasons employers hire unqualified workers to do skilled work. Nevertheless, these surveys indicate that difficulties in recruiting formally trained workers do not appear to be a major cause (Webster et al. 2001, tables 17–19). Firms who have been experiencing shortages of skilled labour are no more likely to upgrade existing employees than firms without shortages. Additionally, earnings data have been consulted as they can reveal how highly employers value trade qualifications over lower qualifications. Table 3 shows that during 1996 trade-qualified workers only received a moderate premium over people qualified with a one-year certificate in both trade jobs and intermediate and elementary production jobs. While this suggests that they are more productive, it is not clear that all jobs warrant the full-skilled trade-level qualifications. Many employers seem content to upgrade workers to do trade jobs (rather than bid up wages to attract qualified ex-trade tradespeople) which implies that a significant minority of jobs do not need formally qualified trade workers.

Table 1: Percentage distribution of employed men across post-school qualificati

Occupation	Trade certificate		P
	Metal, vehicle & electrical	*Building*	*Other*
Tradesmen			
Metal	63.0	0.8	1.8
Building	3.7	53.3	1.3
Vehicle (incl. motor mechanics)	62.5	0.6	1.2
Electrical	60.0	0.8	1.8
Other	19.0	3.2	16.0
Administrators, managers	11.4	5.3	4.4
Professionals, technicians	7.3	1.6	1.5
Clerical, salespeople	8.3	1.5	3.0
Semi-skilled and unskilled manual, service workers	8.8	2.4	2.7
Total	**14.7**	**5.0**	**3.4**

Source: 1996 Census of Population and Housing, 1% sample file

ons categories by occupation, 1996

ost-school qualifications			
Higher qualifications	Lower qualifications or level not given	No qualifications or not stated	Total
4.4	6.8	23.3	100.0
2.4	8.2	31.1	100.0
1.8	8.0	25.8	100.0
5.9	7.2	24.3	100.0
5.4	9.7	46.6	100.0
30.7	9.3	38.9	100.0
62.8	7.7	19.1	100.0
18.1	9.1	60.1	100.0
5.4	9.1	71.5	100.0
21.7	8.7	46.6	100.0

Table 2: Percentage distribution of employed men across occupations by

Occupation	Trade certificate		
	Metal, vehicle & electrical	*Building*	
Tradesmen			
Metal	18.6	0.7	
Building	1.3	54.3	
Vehicle (incl. motor mechanics)	11.8	0.3	
Electrical	13.7	0.5	
Other	7.7	3.9	2
Administrators, managers	10.7	15.0	1
Professionals, technicians	9.6	6.0	
Clerical, salespeople	8.7	4.7	1
Semi-skilled and unskilled manual, service workers	17.9	14.5	2
Total	**100.0**	**100.0**	**10**

Source: 1996 Census of Population and Housing, 1% sample file

post-school qualifications, 1996

Other	Post-school qualifications: Higher qualifications	Lower qualifications or level not given	No qualifications or not stated	**Total**
2.3	0.9	3.4	2.2	**4.3**
2.0	0.6	4.8	3.4	**5.0**
1.0	0.2	2.6	1.5	**2.8**
1.8	0.9	2.8	1.8	**3.4**
28.5	1.5	6.7	6.0	**6.0**
8.0	19.7	14.9	11.6	**13.9**
8.7	55.8	17.2	7.9	**19.3**
3.7	13.0	16.4	20.1	**15.6**
24.0	7.4	31.3	45.6	**29.7**
00.0	**100.0**	**100.0**	**100.0**	**100.0**

Table 3: **Average individual gross weekly income for male employees working in selected manual occupations by post-school qualification, Australia, 1996**

Post-school qualifications	Tradesmen in metal, building, electrical and vehicle	Intermediate or elementary worker
	$	$
Bachelor degree and above	753.1	545.4
Associate and undergraduate diploma	715.4	541.2
Skilled vocational qualification	647.6	598.0
Basic vocational certificate	630.4	600.9
No post-school qualifications	540.0	516.1
N	5076.0	7631.0

Source: 1996 Census of Population and Housing, 1% sample file

Factors inhibiting training paths for unqualified tradespeople

Chronically high levels of unqualified tradespeople indicate some type of failure by the training system to provide an appropriate mix and quantity of training courses for workers and businesses. Some of the inflexibility of apprenticeship arises from the traditional assumption that trade training should be a (workforce) entry pathway. This has made traditional trade training less suitable for older workers who require structures which offer scope for prior recognition, more out-of-normal working hours class times and a smaller salary sacrifice on account of their financial commitments, maturity and work experience. Potentially, the training system should offer types of training and accreditation, such as:

- short courses in the trades area for trade jobs that do not require the full set of trade skills
- training programs for experienced workers who require additional or top-up off-the-job training/education to achieve the competency of formally qualified workers
- accreditation procedures for workers who have acquired full competency but have not completed an apprenticeship

Most of this inflexibility does not appear to arise from legal factors. By 1980, only a few legislative impediments which inhibited the flexibility of the trade-training system existed and almost all of these had disappeared by 2000. Some remaining barriers may, however, be encoded in regulations.

Prior to the process of award restructuring which began in the late 1980s, wage and job classification structures and the work culture in many firms was not designed to encourage workers to upgrade skills through on-going training courses. Few opportunities existed for unskilled and semi-skilled workers to progress through to skilled status and beyond. According to table 4, one in four

firms with more than 20 employees, whose main occupation group was tradespeople had introduced career paths and between one in three and one in five firms had introduced formal training where previously none had existed by 1990. Structures, especially in the metal trades, were established to support adult apprenticeships and training pathways for sub-trade-level workers.

Aside from legislative and award provisions, the training pathway for skilled manual workers can be blocked at several junctures. Formal recognition procedures for people who had acquired the required level of competency and processes for allowing partially skilled people to complete the skill process (access to off-the-job courses, credits of indenture terms and recognition for prior learning or RPL) have been examined. This has revealed that the training pathway is more of a windy and unsignposted track than a clear channel. Many of the courses and accreditation processes are semi-unofficial, *ad hoc* and not widely advertised. The Tradesmen's Rights Regulations Act 1946, State and Territory recognition legislation are best known and most established but these appear to supply, at most, only 3–4% of recognised domestically trained tradespeople. Lack of co-ordination among relevant training parties, lack of pecuniary incentives by the registered training organisation to recognise existing skills and provision of information to workers and employers in the more fragmented parts of industry appear to have hindered the formal skill accumulation process in some States.

The low importance of these extra-apprenticeship methods for allowing people to supplement their skills and acquire full AQF-III status is epitomised by the absence of any serious data collection on this issue.

The incidence of adult trade training

Having looked at the existence of institutional or legislative barriers and positive provisions for training pathways, data are examined on:

- the incidence of training among production (blue collar) workers
- the number of apprentices or people who are undertaking skilled vocational education receiving RPL
- the number of adults in trade training
- the number of people who were formally upgraded as adults working in the trades

Most of the data will only reveal trends from 1989 to the mid-1990s. The slow diffusion of information on training reforms and the length of time required for firms to change their human resources management systems in industry implies that it is too early to detect effects from the New Apprenticeship reforms of 1998.

Table 4: Main changes at workplace since 1987, Australia, 1990

Change	Respondent			
	Employee relations manager		Union delegate	
	All firms	*Firms: main occupational group tradespeople*	*All firms*	*Firms: main occupational group tradespeople*
Introduction of or change to dispute settling procedures	29.5	22.5	23.1	28.2
Alteration to award classifications	51.7	41.9	46.8	40.4
Introduction of new career paths	41.4	25.7	37.7	25.2
Introduction of formal training where previously none existed	35.9	33.5	32.8	22.9
Introduction of pay increments	19.5	16.5	27.1	31.4
Removal of discriminatory clauses in awards	14.8	11.9	13.6	12.9
Change in working time arrangements	43.7	41.4	42.5	40.2
Introduction of consultative/ employee participation arrangements	25.6	30.5	25.5	32.9
Introduction of payment by electronic funds transfer	51.1	62.3	49.3	70.9
Changes to work practices	54.9	45.8	45.2	50.2
Total changes	**368.1**	**332.0**	**343.6**	**355.2**
No changes	8.0	8.0	8.4	7.1

Note: Excludes firms with less than 20 employees; firm level data have been weighted by employee size
Source: Australian Workplace Industrial Relations Survey, 1990, Employee Management Relations and Union Delegate questionnaires

Most data sources are consistent with the view that, since the late 1980s, adults have become more likely to gain a skilled vocational qualification—although the number of adults involved appears very small, especially compared with the number of unqualified tradespeople currently working in the metal, building, vehicle and electrical trades. Provisions for the recognition of existing skills have assisted this change.

To illustrate these conclusions, data from three collection sources are presented in tables 5 and 6 and figure 1. Table 5 presents a comparison of the extent to which firms have offered tradespeople or plant and machine operators formal training. The full sample of firms reported that 43.8% and 42.2% of firms in 1990 and 1995, respectively, had furnished their tradespeople with formal training (excluding on-the-job training, conferences and apprenticeship training)

over the previous year. However, if the sample is limited to firms whose main occupation was tradespeople, the respective percentages rise to 49.3 and 59.7, implying a ten-percentage point increase over the five-year period.

The formal training rate for plant and machine operators was lower but in both samples exhibited a strong rise. In the full sample, the percentage rose from 25.7 in 1990 to 30.1 in 1995. Some of this rise in formal training may have been attributable to the Training Guarantee Levy as well as the award-restructuring process.

Table 6 shows the incidence of training for persons employed in one of the production-based occupations where trades-based employment is most common (i.e. the three broad occupation groups: tradespeople; plant and machine operators and drivers; and labourers and related workers). The table also distinguishes between people who possessed formal skilled vocational qualifications and those without.

The data show that after declining markedly between 1989 and 1993, the incidence of formal training (i.e. participation in structured in-house and external training courses) rose during the period 1993–97, and by the end of the period stood at much higher levels than eight years earlier. Such patterns are also suggestive of a pro-cyclical pattern to the incidence of formal training, falling as output and demand declines and rising as output and demand rises.[1] Second, and in stark contrast to the trend for formal training, after rising during 1989–93, the incidence of participation on informal training activities fell during 1993–97, though in this case the incidence of training by 1997 stood at levels either equal to or only slightly above those observed in 1989. Again, this pattern was common to both the qualified and unqualified workers.

While *a priori* it is difficult to predict how training rates might vary with the business cycle, *ex post* these two trends appear entirely sensible and presumably reflect changes in the relative costs of, and benefits from, different types of training. With declining demand, businesses will come under pressure to reduce costs, leading to a decline in those training activities that add to overall business expenditure. The only significant cost of informal training, however, is the opportunity cost of workers' time, and this will tend to decline during periods of economic downturn. Hence, given the presence of slack labour resources, it is entirely rational for firms to substitute the now relatively inexpensive informal on-the-job training in place of the relatively more expensive formal types of training. Once economic opportunities improve, however, firms are much more likely to re-implement training practices that are designed to enhance the long-run productive potential of the workforce.[2]

Table 6 also reveals a marked rise in the incidence of employees undertaking vocational study. In this case, however, the growth occurred during 1989 and 1993, and there was no subsequent reversion to the much lower levels of the late 1980s. As would be expected, this rise was most pronounced among those workers without vocational qualifications.

The patterns shown in table 6 are generally consistent with claims that initiatives introduced in the late 1980s and early 1990s as part of award restructuring and training reform would produce positive effects in terms of increasing training effort. This is most directly reflected in the rising proportion of unskilled workers seeking skilled qualifications but is also reflected in the much higher incidence of formal training generally. Finally, given the emphasis here on male-dominated trades, results are for men only.[3] The exclusion of females, however, had very little effect on the patterns summarised above.

To verify that the trends observed in table 6 are indeed the result of changes in behaviour rather than changes in the characteristics of workers and jobs, logit regression analysis of the incidence of the three types of training was undertaken (details are not shown here but are presented in the full report, Webster et al. 2001). The selection of explanatory variables was based, as far as possible, on research reported in Wooden et al. (forthcoming, chapter 3). The key finding of interest relates to whether there is a significant change over time in the level of training once other factors (in the data set) have been accounted for. Consistent with the results reported in table 6, the results confirm that, even after controlling for worker characteristics, there have been marked changes over time in the incidence of training. Specifically, the incidence of formal training in 1997 was twice that in 1989, while participation in vocational study increased more than sixfold. Only with respect to informal on-the-job training has participation not increased over time. While it rose sharply during the recession of the early 1990s, it subsequently fell and by 1997 its incidence was not significantly greater than in 1989.

Additional information on the temporal patterns in vocational training for adults can be derived from data on the age of the apprentice upon commencement of the indenture. Figure 1 shows a strong rise in the proportions of adults across the four major trade groups since 1980–81. This rate of increase was particularly marked in the early 1990s—the immediate period after the implementation of award restructuring. The electrical trades have the highest rates of adult apprentices (at 21.1% in 1996–97) and vehicle trades the least (13.7%).

Further data on the frequency of RPL for adult vocational students (not shown here) shows that this recognition increased during the 1990s. However, the overall magnitudes of workers pursuing this career path is very small by comparison with the overall numbers of unqualified workers doing trade work. Surprisingly, people studying for a trade qualification are less likely to receive RPL for previous work experience compared with degree and diploma students. Funding formulae for Technical and Further Education (TAFE) colleges gives them incentives to understate the 'true' level of RPL or even withhold RPL, but it is not clear why trade students would be more affected *vis-à-vis* diploma and degree students. It is also possible that some students desire to undertake the full course to consolidate their skills.

Existing fragmented State data collections indicate that numbers of adults getting reduced indenture/contract periods owing to their existing skills is, on balance, rising. However, State data compilations are not uniform, and any information describing adult pathways to skilled qualifications is incidental to the data collection process.

There appears to be no positive trend in the portions of non-Australian skilled tradespeople seeking local recognition for their qualifications through either the Commonwealth Tradesmen's Rights Regulations Act 1946 or State and Territory legislation. A high proportion of these applicants is thought to be overseas-qualified tradespeople.

Finally, ABS population Census data from 1971–96 suggest that the percentage of Australian born men in given birth cohorts citing trade qualification as the highest qualification was higher in 1986–96 compared with 1971–86. This change will have arisen because there has been a growth in the percentage of men who have moved from the 'no qualification' or 'basic qualification' groups to the 'skilled vocational qualification' group after 1986.

Table 5: Percentage of firms offering formal training programs for employees by occupational group. Excludes on-the-job training, conferences, apprentice training, Australia, 1990, 1995

Occupational group	All firms		Firms whose main occupational group was tradespeople	
	1990	1995	1990	1995
Managers	41.5	78.8	28.6	36.1
Professionals	39.4	60.3	24.8	22.7
Para-professionals	41.6	59.1	23.8	28.2
Tradespersons	43.8	42.2	49.3	59.7
Clerks	39.0	73.7	24.0	37.0
Sales workers	23.6	40.9	17.9	14.4
Plant and machine operators	25.7	30.1	10.6	18.5
Labourers	28.3	39.0	18.8	24.5
None	25.5	18.6	38.7	29.6
Total number of firms in sample	**2004**	**2001**	**241**	**216**

Note: Excludes firms with less than 20 employees; firm level data have been weighted by employee size
Source: Australian Workplace Industrial Relations Survey, 1990, 1995, Employee Management Relations questionnaire

Table 6: Percentage of production workers* receiving training by type of training, Australia, 1989, 1993 and 1997

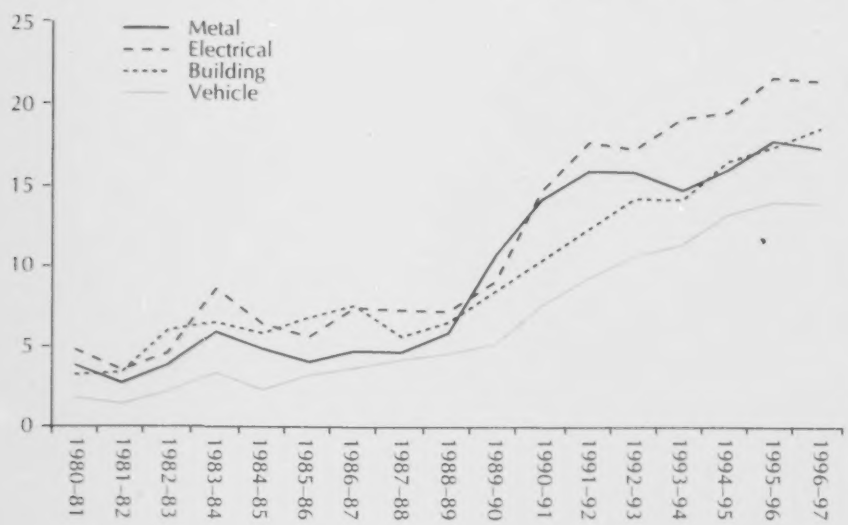
	All persons			Males only		
	1989	1993	1997	1989	1993	1997
With formal skilled vocational qualifications						
Formal training	31.7	22.0	43.2	31.7	22.1	43.8
Informal (on-the-job) training	63.8	73.5	66.0	63.9	73.5	65.9
Currently studying for a vocational qualification	1.2	2.1	3.8	1.2	2.1	4.0
Without formal skilled vocational qualifications						
Formal training	18.8	16.1	29.1	21.1	17.8	30.5
Informal (on-the-job) training	62.7	70.5	62.4	65.9	73.5	64.9
Currently studying for a vocational qualification	1.3	6.3	7.0	1.3	7.4	8.5

Note: The base population is persons with a wage or salary job in last 12 months, excluding secondary school students

* occupation of their main-period job was either: tradesperson, plant and machine operator and driver, or labourers and related worker

Sources: ABS, How Workers Get Their Training Survey 1989, unpublished data; ABS, Survey of Training and Education 1993, unpublished data; ABS, Survey of Education and Training Experience 1997, unpublished data

Figure 1: Percentage of apprentice commencements over the age of 21 years, Australia



Source: NCVER, unpublished statistics, Apprenticeship Statistics 1984–85 to 1993–94 (NCVER), Apprenticeship Statistics 1983–84 to 1992–93 (NCVER), Apprenticeship Statistics from 1980s (DETYA)

Job satisfaction for trade-qualified workers

Expected and actual job satisfaction is an important determinant of the desire to undertake education and training and to prematurely leave an occupation. Even though it is not possible to objectively compare satisfaction levels across individuals, different levels of subjective satisfaction across groups of the workforce may explain systematic differences in labour market behaviour.

In this section we compare the monetary and non-monetary rewards received by people with a trade qualification compared with other qualifications. Data have been derived from the International Social Science Surveys Australia (IsssA) which have been conducted annually or biannually in Australia since 1984. These surveys cover a range of psychological, sociological and economic issues and are in unit record format. The surveys used in this analysis were restricted to 1984, 1986, 1987, 1994 and 1995.

Non-pecuniary job satisfaction has been measured as the sum of the responses to five job satisfaction questions. Are you satisfied with: the importance of your work and the feeling of accomplishment it gives you? The chance to use your skills and abilities? The people you meet? The security and predictability of your future? And, How satisfied are you with how interesting your work is, and the enjoyment you get from it?

Each statement is ranked on a 1 to 8 scale. In addition, the disutility arising from longer hours of work has been included in the non-pecuniary job satisfaction variable. 'Hours' has been squared and the weight in the job satisfaction variable has been determined empirically. A more complete description of the data is found in the full report.

Tables 7 and 8 present the mean index of non-pecuniary job satisfaction according to selected socio-economic variables. With the exception of trade qualifications, workers with post-school qualifications report significantly higher levels (significant at the 0.05 level) of non-pecuniary job satisfaction than unqualified workers. While people who possessed a higher degree had higher mean non-pecuniary satisfaction than bachelor degree and 'other' qualification holders, this difference was not significant (0.05 level). According to table 8, higher skilled occupations appear to impart more non-pecuniary satisfaction than lesser skilled jobs. Professional workers followed by managers and administrators reported the highest levels of satisfaction and plant and machine operators and drivers reported the lowest. Tradespeople, clerks and sales and personal service workers reported average levels of satisfaction.

Subsequently, a model to test the determinants of achieved pecuniary returns and non-pecuniary job satisfaction according to post-school qualifications has been devised. The model, which was estimated by regression analysis, found that trade qualifications are associated with lower measured non-pecuniary job satisfaction and pre-tax wages and salary income compared with other types of qualification.

This result provides a basis for questioning the quantity and quality of labour that is attracted into the trades and into trade qualifications. It also provides a partial explanation for the observed attrition from the trades, especially into lower paying jobs.

Table 7: Non-pecuniary job satisfaction by highest post-school qualification type, Australia, 1984–95

Post-school qualifications	Mean	Frequency
Higher degree	0.15	324
Bachelor degree	0.09	779
Diploma qualification	0.14	537
Trade qualification	-0.07	1177
'Other' qualification certificate	0.12	573
No qualification	-0.05	421
Missing	0.10	1955

Note: N=5766
Source: International Social Science Surveys (Australia), 1984, 1986, 1987, 1994 and 1995

Table 8: Non-pecuniary job satisfaction by occupation, Australia, 1984–95

Occupation (ASCO1)	Mean	Frequency
Managers and administrators	0.16	539
Professionals	0.25	776
Para-professionals	0.11	346
Tradespersons	0.02	511
Clerks	0.06	666
Salespersons and personal service workers	0.02	470
Plant and machine operators and drivers	-0.26	240
Labourers and related workers	-0.16	335
Missing	-0.07	1883

Note: N=5766
Source: International Social Science Surveys (Australia), 1984, 1986, 1987, and 1995

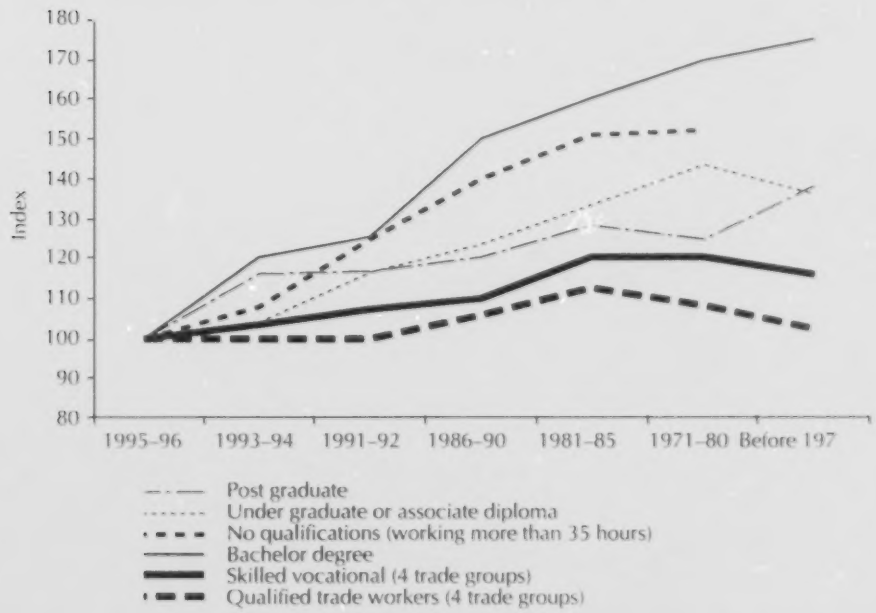
Attrition from the trades

Attrition or wastage from the skilled manual trades has been acknowledged for some time as a factor contributing towards the shortage of skilled tradespeople in certain markets. Separation from the 'home' occupation is generally higher for tradespeople than for professional and para-professional workers and is inversely correlated with median income. Lack of careers paths and limited opportunities for promotion through training pathways was highlighted during the late 1980s as a source of job dissatisfaction and subsequently high rates of attrition. In addition to its other goals, award restructuring was intended to specifically address this shortcoming.

High wastage or attrition is often found in occupations where there are comparatively few prospects for advancement and the main avenue for job variety and challenge is acquired through changing jobs or occupations.

Census data indicate that careers paths for tradespeople, as measured by their incomes, are considerably flatter compared with other major classes of skilled worker. Figure 2 reveals that qualified tradespeople who remain within trade labour markets have the flattest earnings profiles. While their profiles are flatter than men with no qualifications, this is owing to different starting incomes. In addition, all men who have gained a skilled vocational certificate in the four main trade areas have steeper earnings profiles than qualified men who remain working in the trades. It is not surprising, therefore, to find that many men are attracted to jobs outside their trade.

Figure 2: Index of average individual incomes for men aged 21 to 65 by qualification and year qualification obtained, Australia, 1996



Notes: 1995–96 = 100 except for no qualifications where 100 is taken at 3.5 years since leaving school. For men with no qualifications, year of qualification has been determined by the age they left school plus 3.5 years. Major trade groups include metal and engineering, building and construction, electrical and vehicle

Source: ABS 1996 Census of Population and housing, 1% sample file

Generally, qualified tradespeople who leave the trade for managerial jobs also improve their earnings, but those who leave for other occupations do not. Tradespeople who take up unskilled labouring jobs generally suffer a decline in earnings. Qualified tradespeople leave the trade for a range of reasons, the most

common being to get a better job or more interesting job. Coming a close second in importance are people who left to get better pay or seek a promotion. These findings reinforce the analysis on job satisfaction above. Direct surveys of tradespeople reveal that few people were discouraged by the conditions of work and only a small percentage left because of a lack of work (see Webster et al. 2001, figure 24).

This research also sought to inquire whether participation by qualified tradespeople in post-trade training courses would produce more highly skilled production workers who have a higher productivity and can thus command higher wages. Unfortunately, the empirical evidence is contradictory. The 1997 ABS Education and Training survey suggests that workers who have undertaken further training improved their work efficiency, but the 2000 Melbourne Institute survey suggests that on balance training courses do not lead to higher wages. The ABS survey indicates that training does not have much impact on the participant's promotion prospects; however, in the Melbourne Institute survey, respondents claimed that, on average, training courses lead to better and more interesting jobs and had a significant effect on career paths.

It is possible that heterogeneity within the trade group or difference in survey year have contributed toward these varied responses. Some trades or some types of tradespeople may be affected differently by training. Unfortunately, the level of information available at hand does not permit us to reach a conclusion.

Conclusions

A study of how adequately the vocational training system has met the quantity of demand for skilled labour and the role of the award-restructuring reforms of the late 1980s promoting more pathways to skilled status must necessarily begin by asking whether formal training is needed at all. Many, if not a majority of, work skills for all occupations are learned informally on the job. Off-the-job education and training and formal on-the-job training are supplements to accelerate the normal learning process. If efficient, they should compress the total skill acquisition process into a shorter space of time in a cost effective manner. If formal education and training is ineptly applied then it is expected that workers and employers seek ways to circumvent it.

A priori it is expected that optimal proportions of formal to informal skill acquisition should vary according to the prior skills and education of the potential trainees, the relative value placed by employers and consumers on accomplished skill versus incomplete skills,[4] and the theoretical content of the skills.

For the traditional manual trades training system, it is important to inquire whether the structure and mode of operation has been appropriate for the

occupations it served. Evidence compiled for this study suggests that historically this has not been the case. By 1996, about one in five trade-qualified workers were employed in lesser skilled occupations and about one in three working tradespeople did not possess trade qualifications. A telling condemnation of an institution is when its main parties 'vote with their feet' and seek to transact their business outside the system that was created to serve them.

People who undertake trade qualifications receive a poor pecuniary and non-pecuniary return compared with unqualified workers who mainly rely upon informal skill acquisition processes. Employers do not appear to highly value many existing trade skills. There has been a large minority of qualified people working in semi-skilled and unskilled jobs at least since the early 1970s, and recent data indicate that most of these ex-trade workers have left because the pay does not compensate for the lack of variety, career potential and challenge that trade work offers.

On the other hand, employers who need trade skills appear content to upgrade less skilled employees to undertake trade work. While this issue has not been fully explored in this study, some evidence suggests that firms which upgrade have strong preferences for skills which are specific to the firm or are particular to some individuals. In some trades, the strongest trend seems to be for non-TAFE post-training provision.

The conventional vocational training system has also trained workers who later enter managerial, professional and technical occupations. Exit from trade jobs into managerial, professional or technical jobs is the main way qualified tradespeople can improve their earnings over the life cycle. While only a minority of skilled workers move into these occupations, this trend has been growing over time as these occupations expand. Despite this trend, the majority of tradespeople (80%) moving into these occupations do so without obtaining higher qualifications. Compared with other occupations, people with trade qualifications and employed tradespeople were less likely to believe that short training courses improved their job performance or would lead to a promotion. Limited evidence on post-trade training enrolments finds a positive trend only for the metal trades.

Data from men working in the metal, building, automotive and electrical trades indicate that the acquisition of a one-year formal vocational certificate has nearly the same effect on earnings as a three- to four-year qualification, but has a significantly greater effect than an additional year of informal skill acquisition through work experience. This suggests that shorter trade courses may be a more efficient mode of complete skill acquisition for some trades.

While the conventional apprenticeship system has worked and will continue to work well for other employers and workers, the areas not served by this system are not margins but sizeable sections of the trade labour market. The more flexible system of trade training which has allowed AQF II certificates in the declared vocations introduced from 1994 is beginning to cater for these

needs. However, as the process of introducing formal apprenticeships into Victoria during the 1920s and traineeships during the 1980s has shown, it takes a considerable time and effort to change the training culture in this labour market.

Despite the general level of dissatisfaction with trade employment, especially as workers approach middle age, several independent data sources imply that training pathways for semi-skilled and unskilled adults have in fact become more prevalent since the early 1990s when the award-restructuring process began. This growth may also be attributable to the training guarantee or the large injection of Commonwealth funds from 1992. However, this increase in formal adult training has emerged from a low base. Other types of post-school qualifications provided by the tertiary education sector have more established routes for adults seeking to upgrade their qualifications.

Accordingly, while on the balance of probabilities the award-restructuring process deserves some credit for assisting the process of continuous skill development, there has only been a slow growth of adult participation in this process. Either the types of recognition and credit for partly skilled adults are not well known throughout the industry or they are too difficult, inconvenient and costly to be worth pursuing. Low interest from unskilled or semi-skilled workers is consistent with the findings of poor pecuniary and non-pecuniary rewards from undertaking trade work.

What should be done?

Current problems with the training system appear to arise not so much from the numbers in training but from the level of training qualifications on offer and the high attrition rates from the trades. Ideal training or education systems are self-regulating. This means that signals from customers and new technologies are transmitted through firms to prospective students and workers and training providers without third-party intervention. Three basic conditions are required for such a flexible and accommodating system:

- Regulatory and institutional impediments should be removed. The award-restructuring process which began in the 1980s has prompted most prerequisite legislative and award reforms. Training packages, and the provision for AQF II level certificates in the traditional trades, which have been operational since 1999 and 1994 respectively, should be regarded as a major advance in this area. However, the path for the skill recognition of workers trained through means other than the apprenticeship or the TAFE system still appears complicated and marginal to the training system. This is especially the case for adult workers who cannot attend classes during normal business hours.
- The incentive structures to encourage workers to train and remain in jobs that use their skills should be strengthened. Without the correct incentives for school leavers and unqualified workers to complete a training course,

there is little point removing impediments. With high leakage rates out to other occupations, training becomes an expensive skill creation option. Specifically, the wage differential for skill should be increased, especially the increment for years of experience. Conditions of work, prospects for advancement and the non-pecuniary rewards from certain jobs should be improved to encourage the highly skilled to remain within their trade.

- Finally, the training and work culture of the relevant industries needs to be educated to keep abreast of the new developments in the training system. This is a difficult and expensive task to accomplish and probably requires extensive site visits as well as a continuation of existing information material. The flow of information needs to be ongoing and, of course, two-way.

Notes

1 Note also that the incidence of such training is more widespread among workers with qualifications. At one level this may seem surprising given these workers have already undertaken substantial training in the past and thus presumably are in less need of further training. Need for training, however, is a function not just of exposure to training in the past but also the nature of the current job. Training rates are higher for these workers because they are working in much more training intensive jobs.
2 Such cyclical variations are similar to the widely observed pro-cyclical variations in physical investment.
3 The available data do not allow us to separately identify persons working in the four main trade areas that are of central interest to this study.
4 For example, there is a big difference in value placed on an accomplished versus partly skilled musician or surgeon, and a small difference between the values placed on a very accomplished versus partly skilled labourer or factory worker.

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On- and off-job approaches to learning and assessment in apprenticeships and traineeships

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Introduction

APPRENTICESHIPS AND TRAINEESHIPS are a key plank in government policy aimed at increasing the quality and quantity of entry-level training. They have been the focus of considerable change, and debate, during the implementation of training reform over the last ten years. Issues relating to participation rates, industrial relations and wages policies have all received significant attention (Australian Education Council Review Committee 1991; DEET 1991; Sweet 1995; Kemp 1996; Lundberg 1997). Discussions about apprenticeships and traineeships tend to concentrate on the institutional apparatus surrounding them or how access to them may be improved; for instance, the implementation of 'user choice' policy has attracted considerable interest (Selby Smith, Selby Smith & Ferrier 1996; Noble et al. 1999; Smith 1999).

However, issues relating to learning and assessment within apprenticeships and traineeships have not received the same degree of attention. Little attention has been paid to what actually happens to apprentices and trainees and how they experience their training. The classic study in this area was the British work of Venables (1967), while more recent Australian studies have included Wilson and Engelhard (1994), Smith (1998) and Harris et al. (1998). The subject of quality in apprenticeships and traineeships has also been of only minor and recent interest (WADOT 1998; Schofield 1999a, 1999b, 2000; Smith 2000). Yet such issues relating to learning and assessment go to the very heart of the quality of vocational education and training (VET) for apprentices and trainees, as well as the ability of the system to deliver outcomes related to promoting lifelong learning (Robinson 2000, pp.28–29) and the provision of valid pathways into the workforce.

The advent of New Apprenticeships has resulted in the merging of apprenticeships and traineeships under a unified framework. This process is by no means complete and, although administratively no distinction is made between apprentices and trainees, the two terms are still used quite extensively in practice to refer to what is perceived to be different skill development processes. Other recent policy initiatives have resulted in an increased range of occupations embraced by this training, particularly in traineeships. Potentially, the ways in which on- and off-job training may be combined and the level of qualifications linked to completion of contracts of training have also diversified. As a consequence, apprentices and trainees may be exposed to diverse and sometimes multiple learning environments during their contracts of training. Each of these environments has the potential to help or hinder learning processes and offers the potential for a range of opportunities for this learning to be assessed in a variety of ways.

This chapter reports on a research study (Strickland et al. 2001) that sought to evaluate on- and off-job approaches to the learning and assessment of apprentices and trainees in order to identify areas that posed particular challenges and to make recommendations about approaches to good practice. The study aimed to:

- identify what different stakeholders expect apprentices and trainees to learn in their contracts of training
- analyse different approaches to learning and assessment undertaken by the learners
- evaluate the extent to which these different approaches contribute to the learning goals and needs of the learners, and suggest where improvements might be made to learning and assessment practices

Many writers and practitioners perceive differences between the two contracts of training, so, in an attempt to acknowledge these differences, this chapter separately reports (where possible) data on apprenticeships and traineeships.

The three data collection methods were focus groups, case studies and a questionnaire survey. Focus groups were conducted in every State and Territory with a total of 66 key stakeholders (State training authorities, industry training advisory bodies/industry representatives and VET curriculum staff, teachers and trainers). Case studies involved two-day visits to 20 diverse sites across Australia, interviewing (as applicable to each site) apprentices and trainees, VET teachers and trainers, training co-ordinators, human resource managers/supervisors, group training scheme personnel and host employers. The questionnaire survey covered a national, stratified sample of 595 apprentices and trainees in two occupations—motor mechanics and hospitality workers.

Stakeholders' expectations of apprenticeships and traineeships

Current policy initiatives in the form of New Apprenticeships have resulted in the merging of apprenticeships and traineeships under a unified framework. Whilst some literature points to some distinct differences between these two forms of entry-level training (WADOT 1998; Ray 2001), in practice, these are not clearly articulated. Within the context of this study, respondents viewed both apprenticeships and traineeships as generally serving objectives relating to, first, entry into the labour market and, second, provision of training pathways leading to nationally recognised qualifications.

These twin agendas give rise to a range of expectations for learning and assessment practices within apprenticeships and traineeships. All respondents in this study expected that essential learning for apprentices and trainees would include both work-based skills and knowledge, along with a range of 'people skills', the development of a work ethic and a range of attributes such as flexibility and the ability to learn. This latter attribute was particularly valued by apprentices and trainees who noted that learning needed to be an essential component of their working lives if they were to keep pace with constant change in their industry.

There were notable differences between stakeholders on the extent to which learning should focus on the development of generic skills and the degree to which multiskilling and the development of industry-wide knowledge should be an outcome of apprenticeships and traineeships. These differences of opinion reflect the tensions inherent in a national training system where the imperatives of transferability and national recognition sometimes compete with industry and enterprise needs and expectations. There was also some disagreement about the degree to which learning in apprenticeships and traineeships should be future-orientated in order to meet career and promotional aspirations of employees. In many respects these tensions are not new. However, ensuring the balance does not tip too far in one direction is essential if apprenticeships and traineeships are to be valued as learning pathways by both young people/workers and employers as a valuable contributor to increasing the skill base within enterprises.

The expectations articulated by stakeholders, apprentices and trainees require that learning and assessment processes deliver a range of outcomes. Learning processes need to promote opportunities for the development of work-related and generic skills in a purposive manner that optimises relevance to both employers and apprentices/trainees. The use of processes such as recognition of prior learning and tailoring learning through the use of individualised training plans and negotiation of learning outcomes with apprentices and trainees was seen as critical to the learning process. Assessment is a means of providing a 'guarantee' that the specified competencies have been

achieved. Assurances of the quality of assessment processes were highly valued by apprentices and trainees who expressed a strong desire for qualifications that would have credibility and currency within the wider community. Employers viewed assessment as a critical source of information upon which they could base future decisions relating to promotion and on-going training.

Different approaches to learning and assessment

There is a wide range of different approaches to learning and assessment in apprenticeships and traineeships. These approaches vary in relation to:

- the mix of learning and assessment undertaken either during the course of normal work or away from work
- the degree of formality in the learning and assessment processes
- the extent to which learning and assessment are supported by qualified trainers or left to those employees working alongside apprentices and trainees

Ways of organising learning and assessment tend to fall into three different models:

- approaches which combine learning in the workplace and in off-site environments geographically removed from the workplace (for example, a Technical and Further Education [TAFE] institute or private provider)
- approaches which include learning at work and withdrawal from normal work duties to attend training in a separate room or skill centre within the same enterprise
- approaches which use the workplace as the sole site for learning

Within these different approaches, numerous learning strategies are employed, but those that are interactive, treat learners as adults and are responsive to learning needs and styles are judged to be of greatest benefit. Self-paced modules to be completed either in the learner's own time or during specified times during work (these could incorporate the use of on-line and multi-media technologies) are also used widely in both apprenticeships and traineeships. Approaches to assessment include those relying solely on summative assessment and those utilising both formative and summative assessment tasks. The off-site environment appears to be the most common site for assessment in the case of apprentices.

This study supports existing research that emphasises the value of the workplace as a learning environment (Billett 1993; Seagraves & Osborne 1997; Candy & Matthews 1998). The study also reinforces and extends the work of Van der Krogt (1998) and Poell, Van der Krogt and Wildereersch (1998) in demonstrating the pervasiveness and value of informal training in the workplace in the development of apprentices and trainees. Informal training, often inextricably woven into the fabric of normal work, makes a significant

contribution to the development of their skills and knowledge. It provides opportunities for apprentices and trainees to apply their learning in authentic situations and to develop their own ways of working. The willing work colleague or 'buddy', on hand to answer questions and to guide and show the apprentice/trainee how to perform tasks, was highlighted as critical to the success of learning. Similarly, opportunities to receive 'informal' feedback and to have mistakes corrected were highly valued. This study illustrates that the informal learning undertaken by apprentices and trainees is shaped by the work structures, processes and cultures established in enterprises. It also reaffirms the importance of appropriate skill development for those people designated to work with trainees and apprentices (Harris et al. 1998; Harris, Simons & Bone 2000).

As reported in previous studies (Cooney 1993; Harris et al. 1998), formal learning in the form of classes or workshops provides apprentices and trainees with valuable opportunities to extend their learning and to focus on the more 'theoretical' aspects of their occupation. The slower pace of off-site environments provides extra time to refine and consolidate skills already learnt or to develop those skills that cannot be learned in the workplace. Opportunities to network and learn from peers, particularly for those apprentices and trainees employed in small enterprises or in occupations where they worked largely on their own, are highly valued for their potential to add breadth and depth to the learning process.

No one particular model of learning and assessment was endorsed by respondents as the most beneficial, but instead they emphasised that a range of learning and assessment approaches can potentially be effective. A summary from this research of the critical factors that support or inhibit successful approaches to learning and assessment is presented in table 1.

Table 1: Factors contributing to or inhibiting the implementation of successful approaches to learning and assessment for apprentices and trainees

Contributing factors	Inhibiting factors
A priority on apprentices' and trainees' twin roles as learners and workers and on providing pastoral care as needed	Little interest in apprentices' and trainees' role as learners or any other factors that may impact on their ability to learn and work
Presence of a culture within an enterprise where learning is valued, supported and promoted (i.e. a learning culture)	Learning not valued within an enterprise
Funding models that are realistic and take into account the realities of providing training and assessment for apprentices and trainees from diverse geographic and cultural backgrounds	
Employers committed to their apprentices and trainees as learners	Employers viewing apprentices and trainees as 'subsidised labour'

Table 1: Factors contributing to or inhibiting the implementation of successful approaches to learning and assessment for apprentices and trainees (cont.)

Contributing factors	Inhibiting factors
Experienced, quality practitioners working with and training apprentices and trainees in the workplace and in off-site learning environments	Co-opted workers who have little motivation or interest in apprentices' or trainees' learning; trainers and teachers who are out of touch with the realities of the workplace
Apprentices and trainees who are motivated, willing to learn and who display some aptitude for their work	Apprentices and trainees who are not motivated and are ill-suited to the work they are undertaking
High quality communication and reporting processes maintained among all parties involved in the contract of training	Infrequent or non-existent communication and reporting processes
Culturally appropriate and relevant materials and course content provided for apprentices/ trainees (particularly important for indigenous apprentices/trainees)	Little or no attention paid to such issues as cultural relevance of materials or training strategies
Literacy and numeracy needs of apprentices and trainees taken into account in the design of learning and assessment strategies	Numeracy and literacy needs ignored
Quality manuals and other training resources provided	Manuals and training resources that are out-of-date and not relevant to workplace requirements
Approaches to learning and assessment that utilise both workplace and off-the-job environments	Models of learning that use work as the only site for learning
Both formative and summative assessment strategies that optimise opportunities for frequent and timely feedback	Assessment strategies that use only summative assessment and provide little or no feedback
Opportunities for apprentices and trainees to participate in activities such as committees and team meetings which provide sites for them to share their learning and to feel that their opinions and ideas are valued within their enterprise	Lack of expectation and few opportunities provided for apprentices and trainees to share opinions and ideas
Provision of a 'rich' range of learning contexts and experiences (where apprentices and trainees are able to work at a level most suited to their experience and progressively be exposed to a varied array of work that is more complex and challenging over time)	Apprentices and trainees confined to routine tasks with little variation in work routine and no opportunities to experience new tasks

Table 1: Factors contributing to or inhibiting the implementation of successful approaches to learning and assessment for apprentices and trainees (cont.)

Contributing factors	Inhibiting factors
Processes where all parties to a contract of training (employers, trainees/apprentices, training providers) are clear about what is expected of them and fully oriented to the processes that will be in place during the contract	All parties unaware or ignorant of their rights and responsibilities
Provision for flexible entry and exit via the use of assessment on demand	Training programs driven by schedules of the training provider and where assessment is available only at set times
Attempts made to align on-job experiences with off-job learning to facilitate the integration of learning by apprentices and trainees	On- and off-site learning environments with little in common and providing apprentices and trainees with conflicting and contradictory information
Learning strategies that treat apprentices and trainees as adults, are interactive and provide opportunities for networking	Learning strategies that are 'school like'

Evaluating different approaches to learning and assessment for apprentices and trainees

Apprentices and trainees report an overall high level of satisfaction with learning and assessment processes. Both the case studies and the survey indicate that many enterprises and registered training organisations (RTOs) are working well to deliver quality learning and assessment processes that are assisting apprentices and trainees to meet their learning goals and needs. There are a number of examples from the case studies where enterprises, either in their own right or in partnership with an RTO, have established successful working arrangements that benefit both enterprise and learners. Trainers, teachers and employers demonstrate a high level of commitment to their respective roles and assessment and learning is being undertaken to the required standards. These findings reinforce data reported in earlier studies that have focussed on specific States' apprenticeship and traineeship systems (WADOT 1998; Schofield 1999a, 1999b, 2000; Smith 1999).

At the same time, the case studies and survey also highlight some significant gaps and challenges which potentially could undermine the quality of apprenticeships and traineeships. While specific evidence of RTOs failing to provide learning and assessment services and employers not meeting their responsibilities was limited, there is enough evidence to suggest that there is significant room for improvement in both learning and assessment practices. The following analysis examines these two learning environments in more detail.

The workplace learning environment

Apprentices and trainees value the workplace for the opportunities it provides to learn skills and knowledge that are directly relevant to their daily work. Aspects of the workplace valued by respondents in both the case studies and the survey emphasise the important role that workplace trainers and employers have in fostering an environment that is conducive to learning within the workplace by actively cultivating relationships with and between workers. Good communication is the main vehicle and the primary mechanism through which a supportive learning climate is fostered. Employers and trainers in the workplace also have a critical role to play in manipulating the flow, content and structure of work to provide apprentices and trainees with access to the type of work that will promote knowledge and skill development.

The case studies highlight the value of informal assessment that can occur as part of the daily work routine for apprentices' and trainees' learning. Positive comments from supervisors and 'tips and hints' about ideas for improvement support and encourage learning.

Formal assessment in the workplace was often, but not always, a co-operative endeavour between the apprentice/trainee and their trainers/employers. In some instances, apprentices and trainees did not appear to have input into the timing of their assessments and on other occasions there could be considerable gaps between the learning and assessment processes. There was also evidence to suggest that while some enterprises and providers worked hard to develop assessment practices that were customised to the needs of the enterprise and holistic in their orientation, other assessment practices amounted to little more than the direct translation of assessment practices used in off-site environments to the workplace.

Despite the high value placed on a range of aspects in the workplace learning environment, both the case studies and the survey revealed that apprentices and trainees believed there was room for improvement. Case study respondents noted that some of their on-site trainers lacked the motivation and skills required to facilitate learning effectively. Integrating the different approaches and methods taught by different trainers/teachers also posed some challenges for apprentices and trainees, suggesting that the process of integrating learning from different learning environments is left largely to the apprentice or trainee. Boredom, owing to the inability to tackle new and more complex tasks over time, often hindered apprentices' and trainees' learning. This was particularly problematic for apprentices and trainees who were employed in very small enterprises which do not undertake a variety of work or in enterprises where employers were unwilling to risk asking inexperienced workers to tackle jobs which needed 'the best person for the job'. The lack of informal and formal assessment and the abilities of some workplace assessors were also noted as issues by apprentices and trainees.

While it was not a significant feature of the case studies, there were a number of instances where the quality of services provided by RTOs was questioned. There is one documented case where an RTO failed to provide learning and assessment plans and services to trainees. In several traineeships, employers and trainees expressed concern about the quality and timeliness of services from RTOs.

Data from the national survey of apprentices and trainees employed in the automotive and hospitality industries supported the findings of the case studies. Respondents were asked to rate the importance of various aspects of their workplace environment in terms of assisting them to learn and whether each aspect was currently happening in their workplace. The data are presented in figure 1 showing mean scores of importance (in ascending order for apprentices) and proportions of workplaces. Weightings for importance ratings were: 3 = important, 2 = of some importance and 1 = not important.

There is a marked similarity between the responses of apprentices and trainees on what is important in the workplace for assisting their learning. Thirteen of the top 15 aspects are, in fact, in common. Three key conclusions emerge from studying these top-rated aspects. First, they reflect some of the core components of a quality learning and assessment system. These include effective instructors, clearly articulated processes for assessment in the workplace, opportunities to work on their own, feedback and encouragement about work performance, and opportunities to undertake meaningful work that will support their learning. Second, they relate to the nature of the relationship between the learners and the people they work with and who train them, help them problem-solve and take time to listen to their concerns and difficulties. The findings highlight the value placed on the quality of workplace relations. And third, an emphasis on the importance of time to the skill development process is also evident. Periods of time for practising skills, experiencing more difficult and complex work, learning 'why' as well as 'how' and having mistakes corrected by their workplace trainers are all valued highly.

Apprentices and trainees pointed to a number of conditions that, while rated important in supporting their learning, are nevertheless currently not as prevalent in their workplaces as they might be. While many of these workplace conditions reflect the tensions inherent in balancing the needs of apprentices and trainees as learners with the needs of enterprises to 'get the job done', they nonetheless signpost aspects which could be enhanced. For apprentices there were nine, and for trainees seven, aspects which, despite being rated as important (with a mean above 2.6), were absent from approximately one-third

Figure 1: Apprentices' and trainees' mean scores for ratings of aspects in their workplaces that are important in helping them to learn (A= apprentices, T= trainees) and percentages of workplaces where they are currently happening

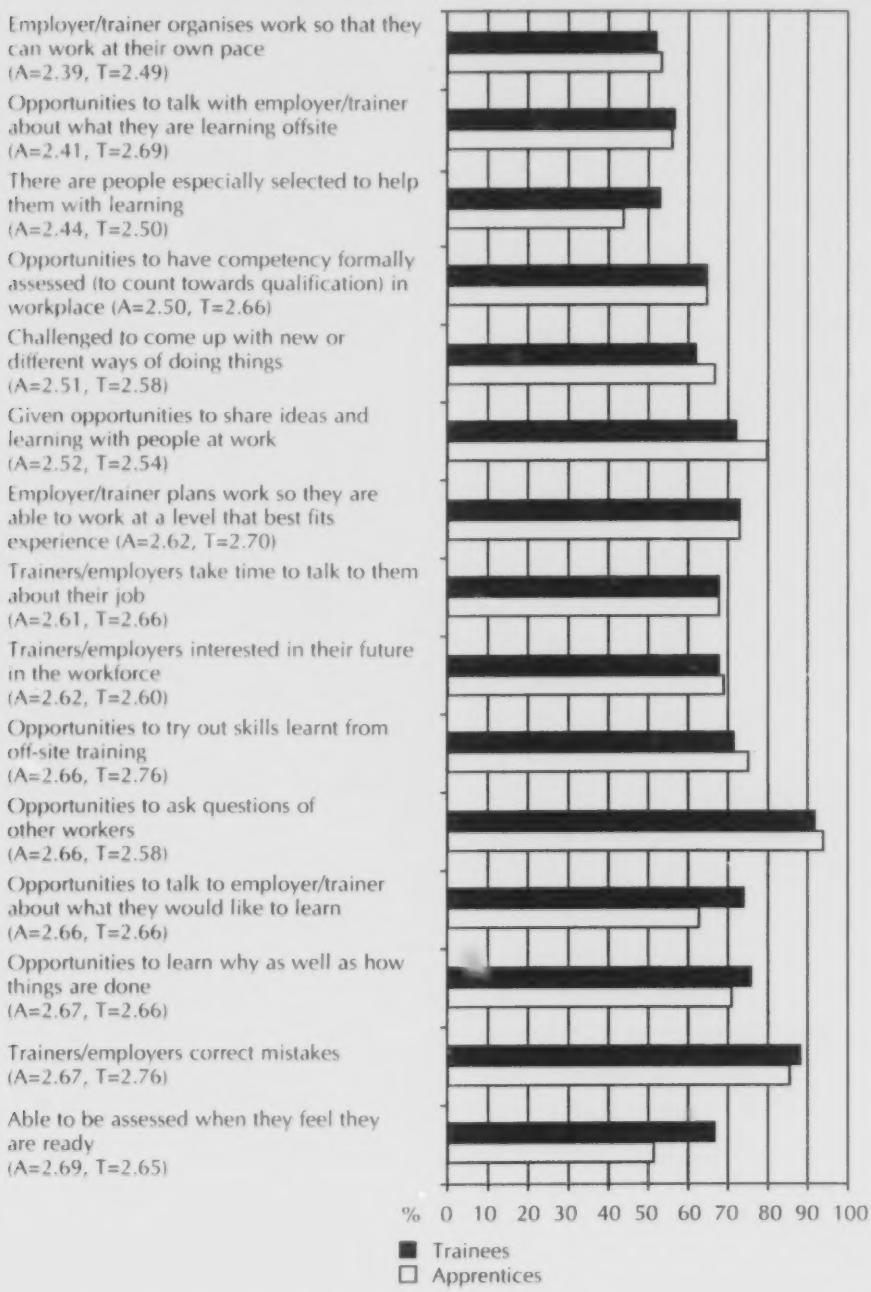
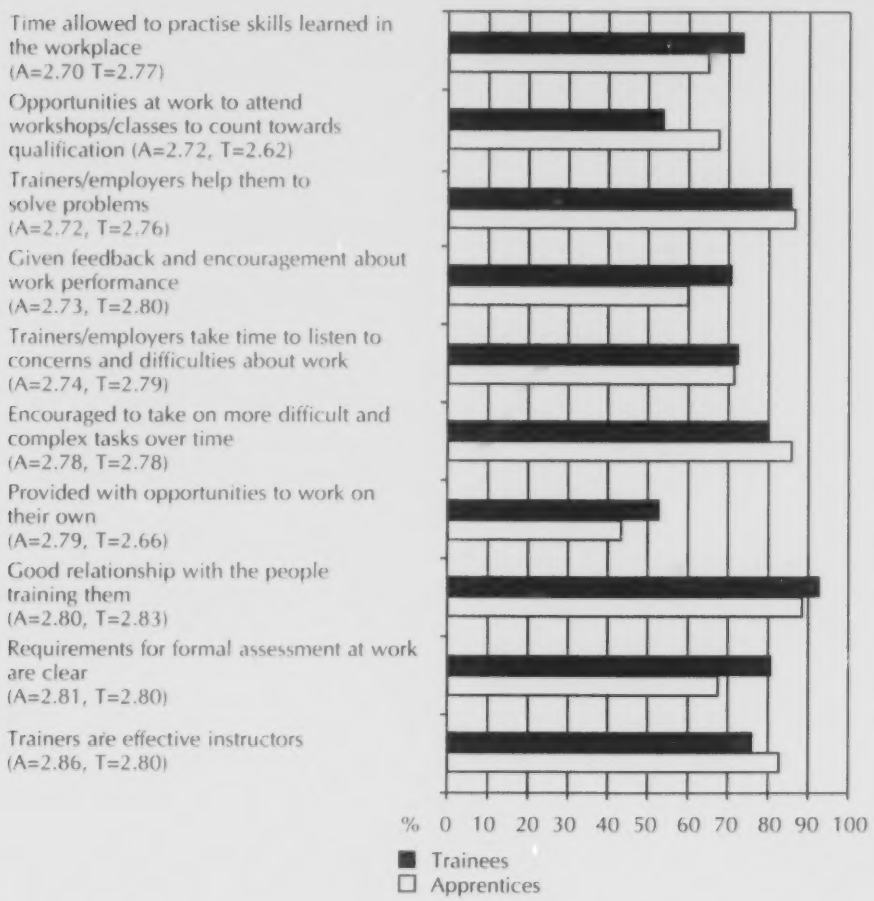

Employer/trainer organises work so that they can work at their own pace (A=2.39, T=2.49)
Opportunities to talk with employer/trainer about what they are learning offsite (A=2.41, T=2.69)
There are people especially selected to help them with learning (A=2.44, T=2.50)
Opportunities to have competency formally assessed (to count towards qualification) in workplace (A=2.50, T=2.66)
Challenged to come up with new or different ways of doing things (A=2.51, T=2.58)
Given opportunities to share ideas and learning with people at work (A=2.52, T=2.54)
Employer/trainer plans work so they are able to work at a level that best fits experience (A=2.62, T=2.70)
Trainers/employers take time to talk to them about their job (A=2.61, T=2.66)
Trainers/employers interested in their future in the workforce (A=2.62, T=2.60)
Opportunities to try out skills learnt from off-site training (A=2.66, T=2.76)
Opportunities to ask questions of other workers (A=2.66, T=2.58)
Opportunities to talk to employer/trainer about what they would like to learn (A=2.66, T=2.66)
Opportunities to learn why as well as how things are done (A=2.67, T=2.66)
Trainers/employers correct mistakes (A=2.67, T=2.76)
Able to be assessed when they feel they are ready (A=2.69, T=2.65)
% 0 10 20 30 40 50 60 70 80 90 100
Trainees
Apprentices

Figure 1: Apprentices' and trainees' mean scores for ratings of aspects in their workplaces that are important in helping them to learn (A= apprentices, T= trainees) and percentages of workplaces where they are currently happening (cont.)


Time allowed to practise skills learned in the workplace (A=2.70 T=2.77)
Opportunities at work to attend workshops/classes to count towards qualification (A=2.72, T=2.62)
Trainers/employers help them to solve problems (A=2.72, T=2.76)
Given feedback and encouragement about work performance (A=2.73, T=2.80)
Trainers/employers take time to listen to concerns and difficulties about work (A=2.74, T=2.79)
Encouraged to take on more difficult and complex tasks over time (A=2.78, T=2.78)
Provided with opportunities to work on their own (A=2.79, T=2.66)
Good relationship with the people training them (A=2.80, T=2.83)
Requirements for formal assessment at work are clear (A=2.81, T=2.80)
Trainers are effective instructors (A=2.86, T=2.80)
% 0 10 20 30 40 50 60 70 80 90 100
Trainees
Apprentices

to over one-half of all workplaces. Four of these were in common (percentages indicate proportions of workplaces where the aspect was not happening):

- opportunities to work on their own (apprentices 56%, trainees 47%)
- being able to be formally assessed when ready (apprentices 48%, trainees 33%)
- being able to attend classes and workshops that count towards their qualification (apprentices 32%, trainees 46%)
- employers/trainers taking time to talk to them about their job (apprentices 32%, trainees 32%)

In addition, apprentices reported the following aspects often absent:

- being given feedback and encouragement about their work performance (40%)
- opportunities to talk to employer/trainer about what they'd like to learn (37%)
- opportunities to practise their skills (35%)
- being aware of exactly what is required when being assessed in the workplace (32%)
- employers/trainers showing interest in their future in the workforce (31%)

Trainees reported these aspects often absent:

- opportunities to talk to employers/trainers about their off-site training (43%)
- opportunities to have their competence formally assessed while at work (35%)
- employers/trainers showing interest in their future in the workforce (33%)

It is especially informative to note in terms of learning that, in quite high proportions of workplaces, there are not people selected especially to help apprentices (56%) or trainees (47%) with their learning at work. In the light of policy directions encouraging development of training/learning cultures within enterprises, this would seem to be a crucial area in need of attention.

Apprentices and trainees report several interesting differences in treatment in their workplace learning environments. Trainees indicate that they have clearer formal assessment requirements, are given more feedback and encouragement about their performance, and are provided with more opportunities both to have work assessed when they feel ready and to talk to employers/trainers about what they would like to learn. Conversely, apprentices appear to have more opportunities while at work to attend classes and workshops that count towards their apprenticeship.

To a large extent, apprentices' and trainees' differences in ratings of importance and occurrence can be explained by the nature and duration of the respective contracts of training. For example, it might be expected that trainees, generally in much shorter programs, would rate more important than apprentices such aspects as being given feedback on performance and time to practise skills, having superiors correct their mistakes, and having work planned so they can work at a level that best suits their experience. Similarly, apprentices, most commonly in four-year programs, might be expected to rate more highly than trainees the opportunity to work on their own or to ask questions of other workers. However, it is the differences in ratings on whether these conditions are present in their workplaces that is of most interest here, and the results highlight several problematic issues in terms of learning and assessment in the workplace.

The off-site learning environment

As with the workplace environment, both the case studies and the survey generally point to high levels of satisfaction with many aspects of the off-site learning environment for both apprentices and trainees. The off-site learning environment provides opportunities to learn the theory that underpins their workplace practice. It is here that 'depth' in learning is promoted, with a particular emphasis on industry-wide knowledge.

The off-site environment also offers apprentices and trainees time away from pressures of work to discuss their learning and work with other trainers/teachers and, just as importantly, their peers. The case studies underline the importance of these often more informal contacts with other learners and the valuable role they play in expanding apprentices' and trainees' knowledge of what happens in other enterprises, thus also expanding the breadth of their knowledge.

The case studies and the survey suggest that a large amount of assessment activity still occurs in off-site environments. Respondents noted the value of assessors independent from the workplace in providing what was perceived to be more 'objective' judgements of their competence.

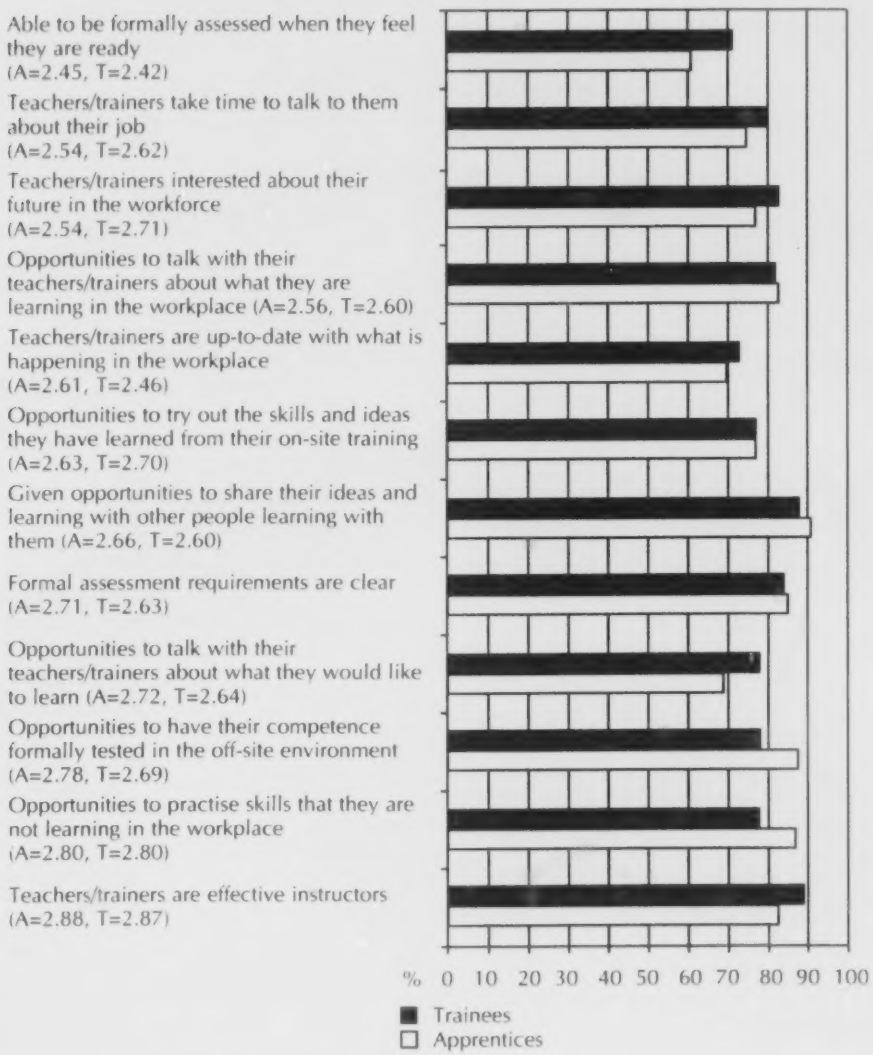
The views of apprentices and trainees on aspects in their off-site environments that are important in helping them to learn, and whether they are currently happening, are presented in figure 2.

There is again a high degree of similarity in importance ratings by apprentices and trainees. The main differences are that apprentices value far more than trainees their teachers being up-to-date with what is happening in the workplace, while trainees are more concerned for their teachers to be interested about their future in the workforce. Neither result is unexpected, given the more solid skills training in apprenticeships over longer time and the more tenuous employment position of trainees.

These results indicate high ratings of importance given to a range of aspects within the off-site learning environment by both apprentices and trainees. The data reinforce the important contribution that off-site environments can potentially make to apprentices' and trainees' learning, particularly in relation to aspects such as:

- time to learn and practise skills that are not being learnt in the workplace
- time to talk about their job with others (teachers and peers)
- opportunities to have their competence formally tested (especially for apprentices)

Figure 2: Apprentices' and trainees' mean scores for ratings of aspects in their off-site environments that are important in helping them to learn (A= apprentices, T= trainees) and percentages of off-site environments where they are currently happening


Able to be formally assessed when they feel they are ready (A=2.45, T=2.42)
Teachers/trainers take time to talk to them about their job (A=2.54, T=2.62)
Teachers/trainers interested about their future in the workforce (A=2.54, T=2.71)
Opportunities to talk with their teachers/trainers about what they are learning in the workplace (A=2.56, T=2.60)
Teachers/trainers are up-to-date with what is happening in the workplace (A=2.61, T=2.46)
Opportunities to try out the skills and ideas they have learned from their on-site training (A=2.63, T=2.70)
Given opportunities to share their ideas and learning with other people learning with them (A=2.66, T=2.60)
Formal assessment requirements are clear (A=2.71, T=2.63)
Opportunities to talk with their teachers/trainers about what they would like to learn (A=2.72, T=2.64)
Opportunities to have their competence formally tested in the off-site environment (A=2.78, T=2.69)
Opportunities to practise skills that they are not learning in the workplace (A=2.80, T=2.80)
Teachers/trainers are effective instructors (A=2.88, T=2.87)
% 0 10 20 30 40 50 60 70 80 90 100
Trainees
Apprentices

However, apprentices and trainees also point to areas that they believe are open for improvement. Both groups consider that their off-site teachers/trainers, though judged to be effective at instructing, are not as aware and up to date with current work practices as they would like them to be. Input into what they would like to learn and the timing of their assessments are also not happening as often as the learners would like. In general, the trainees seem slightly more satisfied than the apprentices that the aspects they consider important for their learning are actually occurring in their off-site providers. Nevertheless, for both sets of learners, six aspects identified as important were currently happening in over four-fifths of all off-site training locations.

Workplace-only and integrated contracts of training

Another interesting comparison is between apprentices and trainees in 'workplace-only' contracts (where learners are not involved in training outside their own enterprise) compared with those in 'integrated' contracts of training. In the national sample, 50 apprentices and 87 trainees reported they were in workplace-only contracts of training. Significantly different comparisons are given in table 2.

The results are consistent in that apprentices in integrated contracts are judging significantly more highly particular workplace aspects than those in workplace-only contracts, and the opposite is true for trainees.

In the case of apprentices, those in integrated contracts placed greater emphasis on development of high quality relationships with employers/trainers and on the capacity of employers/trainers to provide learning experiences which promote meaningful learning. Moreover, these apprentices strongly believed these aspects were happening in their workplaces. The main complaint from apprentices was that around one-third in workplace-only contracts reported the relationship they have with their employer does not provide opportunities for them to talk about their job or about their work concerns and difficulties.

With trainees, those in workplace-only contracts rated workplace aspects as far more important for their learning than did those in integrated contracts. Yet, in many respects, the situation of trainees in workplace-only contracts is of concern. In almost every case, the gap they report between aspects of the workplace that they judge to be important for their learning and the reality of their workplaces is substantial. These findings support the concerns raised by Schofield (1999a, 1999b, 2000) and Smith (1999) with regard to the quality of training arrangements that rely solely on an enterprise to provide all the training for skill development.

Table 2: Comparison of apprentices' and trainees' responses on aspects in their workplaces that are important in helping them to learn, and whether they are currently happening, by two models of training (included are only those cases where there was a significant difference in importance rating)

Aspects in their work environments	Workplace-only model		Integrated model	
	Important? Yes (%)	Happening? Yes (%)	Important? Yes (%)	Happening? Yes (%)
Apprentices:	(n = 50 apprentices)		(n = 373 apprentices)	
Good relationship with the people training them	83.3**	89	92.8	88
Employer/trainer takes time to talk to them about their job	70.8*	67	75.5	89
Employer/trainer takes time to listen to any concerns and difficulties they might have at work	85.4*	70	84.5	89
Encouraged to take on more difficult and complex tasks over time	79.2*	87	91.9	89
	Workplace-only model		**Integrated model**	
Trainees:	(n = 87 trainees)		(n = 85 trainees)	
Employer/trainer plans work so they are able to work at a level that best fits with their experience	86.6**	67	68.3	55
Given opportunities to share their ideas and learning with people they work with	76.3**	72	53.8	50
Employer/trainer takes time to talk to them about their job	85.7*	63	71.1	54
Employer/trainer organises work so that they can work at their own pace	63.6*	44	50.0	57
Challenged to come up with new or different ways of doing things in the workplace	71.6*	58	52.5	52

Note: * p = <0.05 ** p = <0.01

Conclusions and implications

Apprentices and trainees share many views in relation to the factors that are most helpful for their learning in both workplace and off-site learning environments. In reality, however, a significant number of apprentices and trainees reported that those aspects they believe to be important for their learning are absent from their workplaces. Many of the aspects that are not present reflect the continual challenge of juggling the demands of work with the needs of learners in the workplace.

One of the striking features of the data collected in this study is the diversity of approaches that exist in learning and assessment practices for apprentices and trainees. This has been one of the key catchwords throughout much of the recent reform activity within the VET sector. Diversity has promoted the development of innovative approaches to employment-based, structured training that has delivered significant benefits to employers, apprentices and trainees.

Within this environment, however, not all RTOs and enterprises are able to deal with the complexities and challenges offered to them. This study has highlighted that all workplaces and off-site environments are not equal in terms of the quality of learning and assessment they can provide. There are inherent tensions between the needs of enterprises and the needs of apprentices and trainees. Tensions exist over the degree to which structured training should focus on industry or enterprise-specific knowledge and skills. Real differences exist between enterprises in terms of the learning cultures and the resources that they are able to provide to support learning and assessment. This study is a powerful reminder of the need to think realistically about the 'life worlds' of the apprentice and trainee and the challenges faced by employers, trainers and RTOs in creating learning and assessment systems that are of high quality.

Achieving quality learning and assessment systems for apprentices and trainees appears to revolve around two foci:

- monitoring the *balance* between the competing tensions that are inherent in employment-based, structured training arrangements—that is, between the organisational needs of the enterprise and the learning needs of the apprentices and trainees
- developing and sustaining effective *partnerships* between the apprentice/trainee, the employer and the training provider

Maintaining a fair balance would appear to involve significant efforts on the part of employers, trainers and other key stakeholders in being able to mine the potential opportunities that exist within workplaces. The everyday work of an enterprise is the primary (and in some cases, the only) developmental pathway for apprentices and trainees. Work practices and relationships that can potentially facilitate learning need to be promoted. Skills of employers and those significant others in the workplace who are given the responsibility to

work with and support apprentices and trainees need to be developed further. A learning culture (that is, the behaviours, attitudes and beliefs that reside in an enterprise) to support the development of apprentices and trainees cannot be imposed on an enterprise. Institutionally based education and training practices need to be adapted and shaped to fit with the workplace learning culture. Enterprises need to be provided with information, resources and support to assist them to build a learning culture that will provide fair and equitable attention to the needs of both the learners and the enterprise.

The promotion of learning cultures is especially pressing in the context of enterprises where training for apprentices and trainees does not include any opportunities for learning or assessment outside of the enterprise. Whilst many apprentices and trainees are well satisfied with the learning and assessment experiences afforded them by these forms of training, significant numbers of apprentices and particularly trainees noted the absence of a range of aspects from their workplaces that they believed to be important for learning. Many of these related to particular features which apprentices and trainees in off-site environments believe to be important to their learning (such as time to talk about their work, and to practise their skills). This represents a significant gap that needs to be addressed.

The other aspect in need of attention is the development of partnerships. In integrated models of training in particular, successful learning and assessment for apprentices and trainees rely heavily on the strength and effectiveness of the partnership developed between the trainee/apprentice, the employer (who could potentially be a group training scheme) and the training provider. Quality partnerships build an environment where effective learning and assessment can take place. Such learning environments are characterised by apprentices and trainees participating in learning processes that may span different environments but which work in concert to ensure the development of vocational knowledge and skills that are relevant to the immediate work context. In addition, these learning experiences equip apprentices and trainees with the competencies and capabilities for on-going learning and development.

There are a number of suggestions for improving learning and assessment practices for apprenticeships and traineeships that emerge from this study. The following are offered for the consideration of policy-makers, enterprises and training providers. Given the specific focus of this study on learning and assessment in apprenticeships and traineeships, these suggestions naturally cluster in two main areas—implementation of contracts of training and capacity-building of those who help apprentices and trainees learn.

Implementation of contracts of training

- Where contracts of training do not require attendance at a training venue external to an enterprise, every effort should be made to ensure that training plans are used to fully document the learning and assessment processes for trainees and apprentices. These plans should clearly outline the responsibilities of all parties.
- Auditing processes should pay direct attention to and collect evidence on the quality of these training plans and the manner in which they are being implemented in apprenticeships and traineeships.
- Efforts to promote the value of withdrawal of apprentices and trainees from routine work should be explored. Where possible all contracts of training should include some provision for withdrawal from routine work to provide apprentices and trainees with opportunities for learning experiences that will ensure the development of a broad and deep knowledge and skill base that is commensurate with the level of their training qualification, and that will enable interaction with learning peers.
- Specific strategies that support apprentices and trainees in the process of integrating learning from on- and off-site environments should be implemented. These could include strategies that promote increased communication between sites to minimise overlap and duplication.
- Assessment practices that provide greater opportunities for apprentices and trainees to have input into the process, particularly the timing of assessment, should be promoted and implemented.
- Processes that stimulate and support the development and sharing of innovative approaches to: integrating learning from on- and off-job sites, quality resources for learning in the workplace and holistic work-based assessment practices, should be established, funded and widely promoted among RTOs and enterprises.

Capacity-building of those who help apprentices and trainees learn

- Appropriate training and resources should be provided to workplace trainers and assessors, especially those who are involved in helping the 'informal', day-to-day learning of apprentices and trainees. These should provide information and skill development on a range of issues, including communication skills, how to organise work structure, content and processes to meet learning outcomes and how to provide effective and timely feedback on work performance to apprentices and trainees.
- Information and resources that specifically focus on the importance of learning through work, and how appropriate workplace structures, processes and relationships can be developed to support the learning of

apprentices and trainees, should be developed for inclusion in the non-endorsed components of training packages.

- Appropriate training and resources should be provided to staff, who are located in RTOs and undertake contracted work within enterprises, to facilitate their understanding of how existing workplace-learning cultures, work practices and relationships can be developed, adapted and used to support the learning of apprentices and trainees.
- Professional development opportunities should be provided to teachers and trainers employed in RTOs to ensure that they maintain up-to-date knowledge of current work practices within their occupational areas.

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http://www.ncver.edu.au/research/proj/nr9020.pdf

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Factors that contribute to retention and completion in apprenticeships and traineeships

Roger Harris
Michele Simons
Heather Symons
Berwyn Clayton

Introduction

A CONTRACT OF training is successfully concluded when a person leaves the training system with a nationally recognised qualification. The pathway to completion can, however, be interrupted by a number of events, including the cancellation or withdrawal of an apprentice or trainee from their contract of training. A recommencement (sometimes with another employer or in another industry) is also another circumstance that could temporarily interrupt the progress of an apprentice or trainee. All of these outcomes affect the process of retention. Retention is the process whereby people who enter an apprenticeship or traineeship are supported to remain in their contract of training.

Within the current policy context, the process of retention and thus completion has assumed a higher priority. Registered training organisations are more accountable for the outcomes they achieve, and funding is increasingly being linked to indicators such as the numbers of completed contracts of training. Apprenticeships and traineeships are now available in a wide range of industries and can be accessed by existing employees as well as school students. Policies such as 'user choice' have enabled employers, trainees and apprentices to choose from combinations of on- and off-job training that are best suited to their needs. This diversity in both the characteristics of the contracts of training and those people providing and undertaking education and training has resulted in a wider range of factors that potentially could impact on the process of retention and ultimate completion of a contract of training. This chapter reports on a study (Harris et al. 2001) undertaken to examine the process of retention and how it might be enhanced for apprentices and trainees.

Background to the study

Research on attrition and completion rates has a long history within the vocational education and training (VET) sector (for example, Siedel 1972; Sumner 1974; Brown & Dwyer 1984; Macdonald 1984). Interest in the issue has continued into the past decade (for example, Taylor 1990; Mill 1991; Streckfuss & Waters 1990; Misko 1997; Mulvey 1999; Uren 1999), along with a concern over quality in apprenticeships and traineeships (WADOT 1998; Schofield 1999a, 1999b, 2000; Smith 1999, 2000).

However, many of these studies have not concentrated on the 'process of retention' but have chosen instead to examine issues relating to non-completion and wastage (see, for example, DETYA 1999, 2000; WADTE 1999). Studies on the process of retention are few. Research from the adult education and human resource management fields suggests that motivation, past life experiences, the social organisation of the workplace, program characteristics and a wide range of contextual and cultural factors can affect observed education and training outcomes in education and training programs (Beder 1991; Dirkx & Jha 1994; Vann & Hinton 1994; Ree & Carretta 1999). In particular, the concept of persistence has been used in the adult education literature as a way of describing what is a very complex process which will lead some adults to continue their participation in learning opportunities. This concept would seem to be at the heart of the process of retention. Persistence may be defined as a 'complicated series of responses to a series of issues confronted by the individual adult in his or her unique situation as a "universe of one"' (Mackinnon-Slaney 1994, p.269). The concept of persistence is a dynamic one. The three components in Mackinnon-Slaney's model—personal issues, learning issues and environmental issues—together with their various factors, can increase or decrease in importance over the period of an apprenticeship or traineeship.

The literature therefore suggests that a range of factors can contribute to an adult's decision to remain as a learner. These factors can generally be divided into two categories: person-oriented and context-oriented. Figure 1 summarises the factors that can be identified from the literature under these two headings.

Several observations can be made about this list of factors. First, it is apparent that different factors affect retention and completion in apprenticeships and traineeships. Despite current policy initiatives that encourage a blurring of these two types of entry-level training, the research would indicate that this is not the case. Some factors that appear to impact on completion rates in one form of contract of training do not in the other. Second, whilst this list of factors is a useful starting point, what is needed is a greater understanding of the interrelationships between these factors. Third, the table contains a mixture of factors, all of which potentially could impact on the process of retention. For the purposes of designing policy interventions, it is important to be able to distinguish between those factors that are relatively

stable over time and those which are more dynamic in nature and, therefore, more amenable to change.

Figure 1: Factors from the literature that appear to be linked to the process of retention in traineeships and apprenticeships

Person-orientated factors	Context-orientated factors
Motivation to undertake a traineeship/ apprenticeship (WADTE 1999)	Type and quality of social networks at work (Vann & Hinton 1994)
Persistence (Mackinnon-Slaney 1994)	Type and quality of social networks amongst peers (Vann & Hinton 1994)
Gender (DETYA 2000)	Mandatory nature of training (Ree & Carretta 1999)
Interpersonal relationship with employer (WADTE 1999)	Nature of work open to trainees/ apprentices after they have completed their course (WADTE 1999; Ree & Carretta 1999)
Age (WADTE 1999)	Nature of the contract of training (integrated, totally on the job) (DETYA 1999)
Highest level of previous education (DETYA 2000; DETYA 1999)	Occupational area in which the traineeship/ apprenticeship is being undertaken (DETYA 1999)
Past life experiences including experiences of earlier schooling (Cervero & Kirkpatrick 1990)	Productive and meaningful work during the course of the apprenticeship/ traineeship (WADTE 1999)
	Type of contract of training (apprenticeship or traineeship) (DETYA 2000)
	Quality of training (DETYA 1999; WADTE 1999)
	Quality of employment conditions (DETYA 1999; WADTE 1999)
	Nature of employer (enterprise, group training) (DETYA 2000)

These twin foci of the relationships between factors that affect the process of retention (and hence completion) of apprenticeships and traineeships and the possible sites for intervention formed the core of this study. The objectives of this study, therefore, were to

- identify and describe the factors that affect the process of retention
- identify those factors that are most amenable to change
- examine a number of interventions that could be used to enhance retention and contribute to increased completion of apprenticeships and traineeships

Research process

In order to limit the scope of the study, the decision was made to focus on a manageable number of occupations identified in a preliminary analysis of data extracted from the National Centre for Vocational Education Research (NCVER) Trainee and Apprentice Collection. Two cases of high completions and two cases of high cancellations/withdrawals were selected in each of five States/Territories (making a total of 20 cases)—New South Wales, Australian Capital Territory, Victoria, South Australia and Tasmania.

Interviewees were obtained through a snowballing process, where initial contact was usually made with a relevant registered training organisation or key enterprise and, from there, contacts were progressively made in other organisations or with individuals. Interviews took whatever form was feasible given the circumstances and contexts. Responses were obtained in a variety of ways—by face-to-face individual interviews, telephone individual interviews and group interviews. Telephone interviews were used where distance prohibited face-to-face contact or where locating interview space within work time or finding time to track down an individual in an out-of-the-way enterprise was problematic.

A total of 437 interviews were held with apprentices/trainees who were currently employed under a contract of training (n=318), apprentices/trainees who had recently completed their contract (n=35), employers/workplace supervisors (n=33) and teachers/trainers (n=51). (Non-completions were the subject of another study concurrently commissioned by NCVER.)

Factors that affect the process of retention

Data collected during interviews with apprentices/trainees, their teachers/trainers and their workplace supervisors/managers underscored the complexity in the retention process. Three overarching themes emerged from these data. First, retention is a dynamic process and the factors that are likely to promote retention change over time. The types of factors that might influence the retention of a newly appointed apprentice/trainee are different from those for an apprentice or trainee in the last few months of their contract of training. Similarly, the economic context in which enterprises find themselves can also impact on retention. Respondents from the carpentry and joinery occupations noted that retention was enhanced in an economic environment where there was plenty of work available. Aircraft maintenance engineers also reported that decreased job security impacted negatively on retention.

Second, the process of retention can be understood only within the context of a particular occupation's culture (see figure 2). Overall discussions of factors or analysis of aggregated national statistics affecting retention and completion are only general, as the nature of a particular occupation is critically important. In the case of the cooks—for example, shift work, long hours and the often

Figure 2: ***Factors*** **that impact negatively on retention, by occupational gro**

	Aircraft maintenance engineers	Agriculture/ horticulture	Carpentry	Computing technicians	Cooks
Decreased job security	√				
Low pay, unpaid overtime	√	√			√
Little/no support from family, peers, etc.		√			√
Long/irregular working hours, shift work		√			√
Poor quality or irrelevant off-job training					
Poor quality or irrelevant on-job training	√				
Poor economic conditions, lack of work			√		
Poor working relationships with employers, harassment			√		√

ouping

s Metal fabrication	Electrical trades assistants	Hairdressing	Office managers/ clerks	Sales assistants	Store-persons
√		√	√	√	
√		√		√	√
		√			
	√		√		
		√			
√	√	√	√	√	

Figure 2: Factors that impact negatively on retention, by occupational grou

	Aircraft maintenance engineers	Agriculture/ horticulture	Carpentry	Computing technicians	Cooks f
Not suited to the chosen area of employment, no enjoyment/ passion for work		√	√	√	√
Personal issues/ circumstances			√		
Qualification not recognised in the occupation				√ (Cert II)	
Not completed pre-requisite educational requirements				√	
Availability of other work in similar occupational area				√	
Unrealistic expectation of requirements of contract of training	√				√
No extrinsic motivation (e.g. qualification, long-term goals)					√

uping (cont.)

Metal fabrication	Electrical trades assistants	Hairdressing	Office managers/ clerks	Sales assistants	Store-persons
	√			√	
√					
				√	
				√	
√			√	√	

temperamental and volatile nature of head chefs—are all part of the culture of the occupation. Therefore, the observed high level of mobility and low retention of apprentice cooks becomes clearer within that cultural context.

Finally, there is a noticeable tendency for all parties (apprentices/trainees, employers/supervisors and teachers/trainers) to blame each other for the perceived problem of poor retention. However, this was not usually done in terms of single characteristics such as age or poor prior education achievement. Rather the process of retention was attributed to a number of factors rather than just a simple cause/effect relationship.

Across all the occupational groups examined, ten general factors were identified as making a significant contribution to the process of retention. The first two can be said to be prerequisites, without which it is unlikely a training contract would be entered into or, if entered into, would result in completion. Once the individual is embarked on a contract of training, the other eight factors appear to increase the likelihood of completion. These ten factors are as follows.

A strong sense of personal agency on the part of the individual taking up the contract of training

A sense of personal agency is a collected phrase to describe a range of ideas which describe the apprentice's/trainee's readiness to cope with the demands of work and learning. It is more than 'being motivated' and includes the ability to develop and maintain effective interpersonal relationships as well as demonstrating that they have the personal attributes and aptitudes that are required for the job. For employers/supervisors/trainers, this characteristic was usually articulated as 'having what it takes'. A sense of personal agency manifests itself in terms of self-confidence, an ability to make friends, to talk easily with adults/authority figures and an ability to work towards long-term goals. By contrast, young people without a strong sense of agency appear alienated (cut off) from others, seen to lack motivation and see little point in personal effort.

A support network (family, partner, friends) for the individual

Nearly all interviewees identified this factor. Employers often cited 'stable family background' as significant, but many also identified the role of families in providing financial and material support. Virtually all those in training or recently completed training cited family support as a significant factor in allowing them to undertake and complete their training. The low wages paid to those under training contracts meant that family financial and material support was essential—both in starting training and in meeting any unexpected financial difficulties (such as car repairs) while under contract. When asked

about the times when they almost gave up their training, many of those interviewed recalled incidents that illustrated the significance of family support in enabling them to continue. For example, one young cooking apprentice lost her apprenticeship when the business she worked for failed. She was able to find herself a new placement in a town 50 kilometres away because her parents were prepared to drive her back and forth (picking her up after midnight) until she was old enough to get her licence. They then bought her a car.

An initial placement that is suitable and offers conditions conducive to establishing the necessary support to deal with the demands of the contract of training

Where there appeared to be a good match between the desire of the apprentice/trainee to 'get a start' and the employer to train and support the new entrant to the workforce, things appeared to work well for both sides. In these instances, both employers and those in training gave positive accounts of their experiences and demonstrated high levels of commitment to their apprenticeship or traineeship.

However, in many instances, employers did not always appear clear about either their employment requirements or their responsibilities in relation to training. They often did not have suitable recruitment methods in place to ensure that they took on a person who would be suitable for their particular needs and appeared unclear about their role as providers of support and training. Trainers offered the opinion that too often employers expected or needed full-time workers and were using the training system to recruit workers rather than to train workers ('all they want is a pair of hands').

Those in training often reported feeling exploited and underpaid for the work done ('I was expected to make up for the time I missed when I went to TAFE'). For apprentices who reported having changed employer, dissatisfaction with the particular workplace/supervisor was a frequently cited reason for leaving.

Previous satisfying work experience related to the occupational area

This seemed a significant factor in helping to bring about a suitable initial placement. Employers reported using work experience to recruit young people with suitable aptitude and work attitudes. At the same time the initial interest heightened the recruits' willingness/ability to 'get stuck in'. This, in turn, tended to mean they were given more interesting work ('I wasn't just sweeping the floor all the time—I got to do lots of different things right from the start').

Supportive workplace supervisors/managers

Most apprentices/trainees cited the importance to them of being given encouragement and help from their immediate workplace supervisor. In situations where the person in training either came close to giving up or changing employer, one of the most common reasons given was dissatisfaction with their supervisor. Comments included 'supervisor/chef was always criticising or belittling, too demanding, never gave positive feedback, was always too busy to show the trainee what they were to do or how to do it'. Some also indicated that the supervisor treated them disrespectfully.

Supportive workplace culture

Those who expressed high satisfaction with their training and a strong intention to complete tended to see their workplace as supportive: 'It's a very friendly place—everyone is very friendly and helpful—and they'll spend time showing you how to do things if you don't know'. They tended to see themselves as becoming more competent: 'I've learnt heaps'. They also tended to report that there were people they could go to for advice about work or training matters. This support might be provided by someone in the workplace (larger firms) or by training providers: 'The lady from [a training centre] came every month and that was really helpful—she was able to sort out any problems you were having'.

But the question of the impact of particular work cultures raised a broader question around the impact of a labour market structured around gender. A Technical and Further Education (TAFE) trainer of office management trainees reported that 80% of trainees in this area are female: 80% of supervisors are female. Among the carpentry and metal fabrication groups we talked to, 100% of apprentices and 100% of supervisors were male. During the course of the study, a number of respondents suggested that all-male work cultures encourage a culture that reinforces behaviours (such as alcohol abuse) known to be bad for workers' health and unhelpful in terms of their ability to form and maintain sustaining relationships with others. Gendered work cultures may also have a direct impact on workplace learning. For example, male trainees/apprentices may be less likely to seek help or advice.

Opportunities to participate in some form of structured training

Some form of structured training seemed essential in giving apprentices and trainees a sense of their growing competence and a measure of their skills in relation to others. This could take place either away from the work site or within their enterprise but removed from normal work routines. Both employers and those in training seemed to value the off-job environment for both assessment and learning. For apprentices and trainees, off-the-job training

usually allowed them to build relationships with peers and 'compare notes' about other workplaces as well as acquiring new technical knowledge.

The off-the-job component of training sometimes places significant hardships on those in training. In rural areas, for example, some of those in training have to travel long distances to attend training sessions. For some, such as cooking apprentices, TAFE days have to be fitted in around shift work—often adding to the existing strains of such work. In spite of these reported difficulties, though, none of the second- or third-year cooking apprentices who participated in this study advocated the abolition of their TAFE training component, and many appeared to highly value this aspect of their training. For some it was seen as a welcome relief from the pressures of work ('a bludge').

Reliable transport

Having reliable transport seemed a crucial determinant of whether a person completed their training contract. For some, such as office trainees who work regular office hours, adequate public transport is sufficient. However, as many apprentices/trainees are working in industries where split shifts and/or night shifts are the norm, a reliable motor vehicle was almost essential.

It was reported that in rural areas transport is a major issue. Many apprentices have to travel long distances to undertake the off-the-job block training. The lack of suitable away-from-home accommodation was also cited as a major problem. For those living in the district in rural areas, transport was still a factor as there were generally no public transport services between home, the workplace and the TAFE or training centre.

Availability of alternative career paths

Among urban cooking apprentices, the ability to leave unsatisfactory placements and find another placement appeared to be a major factor in determining completion. Many of the third-year apprentice cooks had been working with two or more employers. While some reported leaving because the business closed, most reported changing employers either to remove themselves from unsuitable situations or to broaden their experience. It appeared that, without this mobility, many of them would have failed to continue. It was also reported that some cooking apprentices withdrew from their contracts once they realised that they were unsuited to the work of a chef ('unlikely to cut the mustard as a chef'). In some of these instances they moved into other areas in the industry (that is, they withdrew from the cooking apprenticeship but were not lost to the hospitality industry).

In contrast, in rural areas, it appeared that not only were there fewer alternative employers offering apprenticeships in a specific area but fewer alternative jobs. If a person left an apprenticeship, the end result was usually unemployment and the eventual need to leave town to search for work

elsewhere. These observations suggest that there are significantly different mechanisms facilitating completion for urban and rural apprentices.

Value placed on the qualification

For those in contracts of training extending over several years, the value of the final trade qualification was very high, as was the individual's investment (e.g. foregone income) in obtaining it. Just how costly this investment is was well captured by a third-year cooking apprentice who took the trouble to write a submission to the research team. This submission was handed to the researchers in the hope that 'it might help improve things for future apprentices'.

The author of this submission describes the obvious disillusionment he was currently feeling:

> *At this point of my apprenticeship I would, looking back, not have taken the path of a chef in training. As you can see by the above lists, I have made the necessary sacrifices to succeed. However, I was not aware that after the initial training period, apprentices are regularly exploited and made to work doing qualified chef duties, unsupervised. I now know that this is a common problem in this industry.*

These were sentiments that were reiterated many times by apprentices. If the cumulative effect of the negatives becomes great enough, the person may come to see the price as too high—or simply not be able to continue because immediate needs cannot be met.

A key factor was the perceived value of the trade certificate and the high investment the individual (and his or her family) can have in it. The goal of 'making it to the finishing line' and obtaining the certificate can become a strong motivating force that gets many through the latter part of their contract.

This raises interesting questions about the future of this kind of training if the expectation of a secure employment future fails to be met because of other changes taking place in the industry—such as the deregulation of the labour market or the taking up of new technologies. One trainer of carpentry apprentices pointed to this gap between expectation and possible employment futures for those in the building trade. He pointed out that those apprentices who made it to the end were most likely to find themselves sub-contracting. He pointed out that nothing in their current training was aimed at helping prepare them for operating as small (one or two person) sub-contracting companies.

Respondents noted that many of the above factors that impact negatively on retention are cumulative. Many apprentices and trainees spoke of having to bear one or two negative aspects (for example, poor wages, difficulties with studies) over the period of their contract of training. These circumstances could be coped with, providing there was support and signals that improvement lay in the not-too-distant future. But there were circumstances where added (or continuing) negative circumstances and/or deterioration of long-term 'pay offs'

(for example, a decline in employment prospects within an occupation) no longer seemed to make the current situation worth persisting with.

A model of the process of retention

The process of retention is affected by a number of factors, as detailed above. Each individual who enters the apprenticeship/traineeship system brings a set of 'antecedent factors' that can affect their likelihood of completing a contract of training. Many of these factors cannot be changed. In addition, there are a number of 'contextual factors'. These relate to the choices and life circumstances of the apprentice/trainee and include the level of support they receive for their chosen occupation. These factors also include the exact nature of that choice in terms of the requirements of the contract of training and the nature of the occupational group itself. All these factors are relatively stable over time and are not able to be changed easily. This means that some trainees/apprentices enter their contract of training with already a higher probability of not completing.

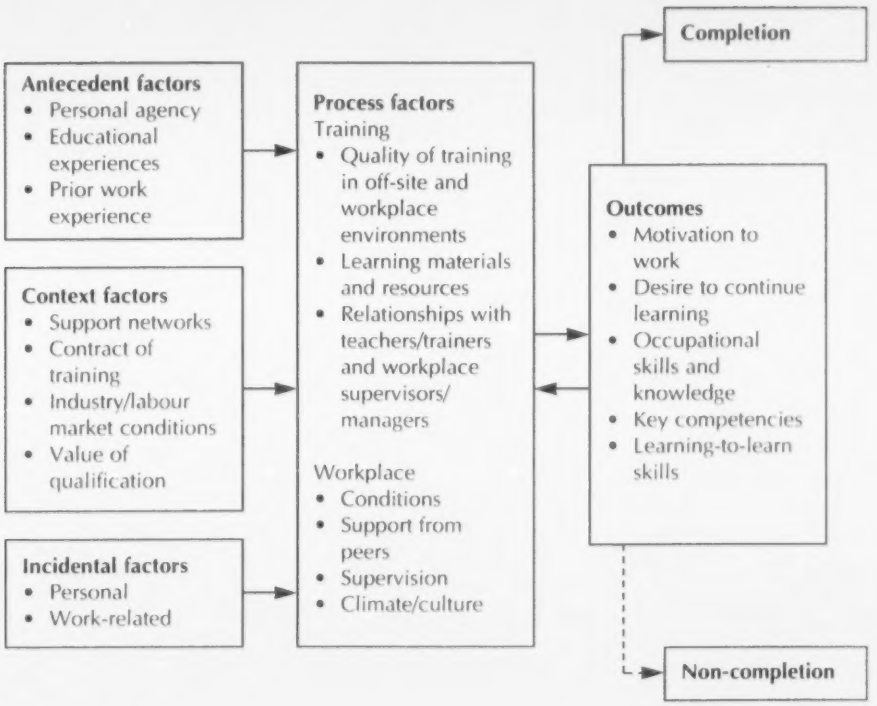
The process of retention also needs to take into account what can be categorised as 'incidental factors'. These are usually personal or work-focussed events that interrupt an apprentice's or trainee's contract of training, such as retrenchment, relationship breakdown, pregnancy, and road or workplace accidents. These factors are unpredictable and can be sources of great stress that can severely limit the amount of time and energy an individual can give to their work and learning.

'Process factors' are related to specific features of the on- and off-job environments that play a major role in determining the retention process. Many of these process factors are 'dynamic' (more amenable to change) and, if optimised, may be able to ameliorate some of the effects of the more 'static' factors known to affect retention. For example, a responsive employer or training provider may be able to provide some of the support that might not be forthcoming from an apprentice's or trainee's family network.

These four sets of factors that comprise the process of retention and their relationship to the event of completion are presented in figure 3.

Figure 3 notes a number of outcomes that are the product of the retention process and help to define the exiting individual. These factors could potentially apply in both the events of completion and non-completion, though, in the tradition of accepting that finishing an educational qualification is a valued and desirable act, would be more significant in the case of completion (signified by the solid line). However, during the course of the interviews, some respondents noted that non-completion could be viewed as a satisfactory outcome—as, for example, when an individual moves to another job or judges that they have acquired what they wanted from a course before leaving it. While the 'system' may judge that non-completion is less that an optimal outcome, it is important to recognise that, in many cases, those who do not complete the qualification do not see it that way.

Figure 3: Factors contributing to retention and completion



Potential interventions to promote retention and completion

Enhancing the process of retention requires that the factors most amenable to change be the sites for primary intervention. Some of the factors identified in this study are relatively difficult to change. There are others that are more 'dynamic' and lie within the purview of VET policy to act upon. Respondents who suggested interventions for enhancing retention also noted that some of the interventions (for example, career counselling) might also require co-ordination and co-operation between the schools and VET sectors in order that the best outcomes are achieved.

Figure 4 outlines possible interventions that may be used to enhance the process of retention in apprenticeships and traineeships. These interventions either emerged during interviews with participants or were developed by the researchers based on their observations, experiences and analyses of the literature on apprenticeships and traineeships. The major criteria for selecting any intervention need to take into account both the occupational context in which the intervention might be implemented and the degree to which it

addresses those factors affecting the process of retention that are most amenable to change within that context.

Figure 4: Interventions to promote retention and completion

Factors	Possible interventions
Personal • Prior skill development/work experience • Personal agency • Support from peers, family, partner, friends • Competing demands for time and energy	• Apprentices and trainees should have access to timely and relevant career counselling. • Curriculum development practices should enhance linkages between work experience, pre-vocational programs and traineeships/apprenticeships. This should also include recognition of prior learning/current competency. • Support and resources for employers to enhance their selection processes should be provided. • Expectations in relation to learning processes and outcomes should be clearly documented in training plans and used as a basis for monitoring progress over time. • Induction processes, information and awareness-raising strategies should be designed to include parents/family to inform them of the expectations, requirements of the contract of training, etc.
Incidental • Changes in personal circumstances • Changes in workplace circumstances	• Personal counselling services and access to emergency financial support should be made available. • Mechanisms such as those that currently exist within group training schemes to transfer apprentices and trainees between employers should be further developed.
Contextual • Entry requirements • Value/marketability of qualification • Wages and conditions available outside the occupational area	• An improved industrial relations system for apprenticeships and traineeships should be examined, including: - established industry benchmarks for breaks, hours, trainee wages via the award system - the encouragement of enterprise agreements • Improved efforts need to be directed to maintaining the currency and value of qualifications within specific industries and to ensure that the skills and knowledge required by apprentices and trainees after graduation are developed.

Figure 4: Interventions to promote retention and completion (cont.)

Factors	Possible interventions
Process *Workplace* • Breadth and depth of work available to apprentices and trainees • Level of work demands • Peer support • Work conditions	• Information, resources and training should be made available to employers and workplace trainers to enhance their knowledge and skills on a range of issues including communication, organising and structuring work to facilitate learning and providing feedback to apprentices and trainees. • Mechanisms should be established to deal with reported incidences of workplace harassment and bullying. Possible strategies include the availability of an independent and confidential hot line or ombudsman to receive complaints from apprentices and trainees. • Requirements relating to occupational health and safety should be monitored in a consistent and ongoing manner. Responsibility for monitoring and reporting breaches of occupational health and safety, bullying and harassment (by whom, how, etc.) should be clearly articulated.
Quality of training • Structure of training • Length of contract of training • Level of integration with other qualifications • Course demands • Integration of on- and off-the-job learning	• Induction programs for apprentices and trainees should specifically include training in how to manage learning in the workplace ('learning to learn' skills) and survival skills to counter potential workplace harassment, exploitation, etc. • Curriculum development practices should enhance linkages between work experience/pre-vocational programs and traineeships/apprenticeships (including recognition of prior learning/current competency to reduce length of contract of training). • Study skills support should routinely be made available. • Strategies should be put in place to assist apprentices and trainees integrate their learning from the multiple learning environments they may encounter over the period of their contract of training. • Efforts to promote the value of withdrawal of apprentices/trainees from routine work for training purposes should be explored (to counter effects of isolation, increase exposure to different ideas, people, etc.).

Conclusion

The process of retention is a complex one. This project relied on a grounded theory approach to develop a model that would incorporate those factors identified by apprentices/trainees, their teachers/trainers and their

managers/supervisors as impacting on retention and completion. The resultant model cannot be definitive, but it represents a comprehensive profile of those aspects that influence retention in, and completion of, apprenticeships and traineeships. In this respect, it furnishes a map of the training landscape that can be used by all parties to gain further insights into how retention might be planned for, and realised in, the training system.

Retention is a process that is the collective responsibility of all key stakeholders within VET. In many respects, retention is one of the products to derive from a quality training system where an appropriate and realistic balance is achieved between the learning needs and aspirations of apprentices and trainees and the needs and expectations of employers and industry.

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http://www.ncver.edu.au/research/proj/nr9019.pdf

Quality in context: Reflections on factors impacting on the quality of apprenticeship and traineeship training

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> *. . . it is not so much the learning processes themselves that give rise to competence development and performance improvement as the way in which they are implemented. These findings direct attention to employee participation, new workplace practices such as incentive-based compensation, and social partnership involvement in joint decision-making.* (Stern & Sommerlad 1999, p.xiii)

RECENT REVIEWS OF the quality of training in the apprenticeship and traineeship system, conducted in three States in 1999 and 2000, have examined and made recommendations to improve the quality of training processes and practices and to improve the vocational education and training (VET) system architecture within which they occur. Both these factors have an important influence on the quality of training experienced by apprentices and trainees.

There are, however, other factors that exert equal and perhaps greater influence on training quality, while not so readily identified. These are the qualitative aspects of workplace culture, personal values and beliefs and working relationships.

Drawing on data from the three reviews and on related research, this study explores these more qualitative factors and considers their impact on quality training experiences and outcomes. In doing so, it identifies characteristics of quality vocational learning from three perspectives: the apprentice/trainee, the enterprise and the provider.

Context matters

Learning is always achieved within a particular social and personal context and is deeply affected by that context. Apprenticeship and traineeship training is by definition work-based training, involving a mix of on-the-job and off-the-job learning experiences and on-going relationships between the principal actors. This context is not a passive backdrop against which training is planned and delivered. Rather, the context supplies the dynamic within which vocational learning occurs and through which the quality of that learning is shaped.

For most apprenticeships and traineeships there are three necessary actors—the employer, the individual apprentice/trainee and the training provider; although, in an increasing number of instances, the employer is also the registered training provider. Each of these actors approaches the apprenticeship/traineeship from a particular perspective, understands training in different ways, looks for and sees different things in a training program and judges training quality differently. That is, they have different cognitive maps. In a recent paper for the United Kingdom Skills Task Force, Penn discussed these in the wider context of the dynamics of decision-making about skills formation.

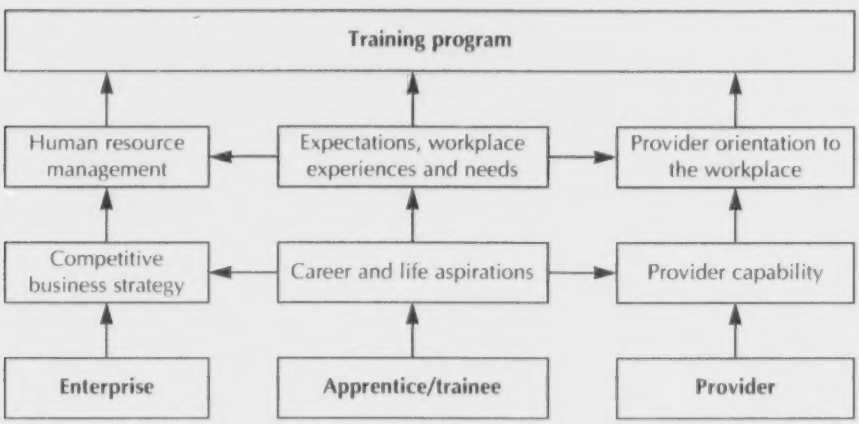
> *The notion of a cognitive map involves a set of positive and negative elements. The positive elements constitute the principles whereby knowledge, perceptions and evaluations of skills' formation are generated: conversely the negative elements constitute those principles that render other knowledge, perceptions and evaluations absent or invisible. An important theme in research centres is on how these cognitive maps are constructed, how they are maintained and how they change.*
>
> *A central finding is that different actors have different cognitive maps. In other words, the cognitive maps of employers, individuals and training organizations, for example, often diverge systematically and that there is no inherent equilibrating mechanism that guarantees that these maps will coalesce nor that they will generate an optimum solution for all participants.* (Penn 1999, p.3)

Consultations and submissions—and in the case of Victoria a commissioned focus group study involving a small number of apprentices and trainees—conducted as part of the three reviews affirm Penn's finding. While the apprenticeship and traineeship system assumes a high degree of mutuality between the three actors, this does not mean that they necessarily understand training quality in the same way. These different cognitive maps inevitably shape the training program and therefore assessments of its quality (see figure 1).

The structured-training program, and its associated learning processes and outcomes, is the fulcrum of the apprenticeship and traineeship system. Recent national debates about quality have been dominated by governments' concerns to ensure accountability and to strengthen their quality assurance and regulatory functions through registration, audit and review. The dynamics operating at the heart of the system have received less attention.

The following sections of this study consider in turn the perspectives of apprentices/trainees, employers and providers that will need to be more closely aligned if training quality is to improve.

Figure 1: Factors influencing the apprenticeship/traineeship training program



Perspectives and experiences of apprentices/trainees

Most training providers have focussed primarily on the off-the-job component of the training program. This is also the area where government has directed most of its regulatory attention.

This emphasis stands in marked contrast to the views of apprentices and trainees who participated in the Victorian focus group study (McDonnell-Phillips 2000). Overwhelmingly, they considered their on-the-job training and their workplace experiences as the most important part of their apprenticeship/traineeship, providing them with the opportunity to acquire practical and marketable skills. In contrast, off-the-job training was regarded as less relevant and less important.

This section considers the perspectives of apprentices/trainees on training quality, gathered primarily from the Victorian focus group study but also from submissions and consultations across the three States reviewed.

At the level of the training program

By their nature, apprenticeships and traineeships involve a mix of on-the-job and off-the-job training, and the link between the two seems to be as important to the apprentice or trainee as the training itself.

On-the-job training

Apprentices and trainees generally expected to receive high quality on-the-job training during their apprenticeship/traineeship, and where there was dissatisfaction, this seemed to be primarily related to poor quality on-the-job

training. The McDonnell-Phillips study went so far as to suggest that the quality of on-the-job training was an important predictor of overall student satisfaction with apprenticeships/traineeships.

Apprentices and trainees identified at least three key factors contributing to the quality of their on-the-job training experiences. The first of these was the provision of structured and planned opportunities for on-the job learning—distinct from incidental and accidental on-the-job learning.

> *I was told that I could watch him do the task, but I wasn't allowed to ask any questions . . . I was behind, and no wonder, he didn't show me anything.*
> (Apprentice Panel Beater, 25 years)

> *I asked if I could go through the workshop to help me in my job, but they told me I wasn't allowed.* (Spare Parts Trainee, 20 years)

The second factor was the content of the work itself. Apprentices/trainees expected and wanted work tasks that were varied, challenging, relevant to their apprenticeship/traineeship and which progressively built higher skills.

> *None of us apprentices are allowed to touch the higher quality jobs. I'm in the third year of my apprenticeship and I'm still doing the same stuff I did in 1st year.* (3rd year Apprentice Boilermaker, 20 years)

> *It's hardly a challenge. Excuse the French, but I'm just being given the crap that no one else wants to do. I haven't learnt a thing so far.*
> (Office Administration Trainee)

Experienced workmates who acted as models of good work practice and who provided job instruction, advice and support in the workplace generally were also very important to the quality of on-the-job training experienced by apprentices/trainees.

> *Most tradesmen don't care about training. They're not interested in you. They just want to get the work done.* (Apprentice Cabinetmaker, 17 years)

Off-the-job training

Apprentices and trainees consulted did see value in their off-the-job learning and were keen to maximise its value. However, they seemed generally less satisfied with the quality of off-the-job training than their on-the-job training.

They identified a number of characteristics that they believe contribute to good quality off-the-job training. For them, the key test was whether what they were learning was useful and relevant to them in performing their job. They also wanted assignments, learning materials and assessment events that were challenging.

They make us cut out pictures of people in magazines with different hairstyles. It makes you feel like you're back in primary school. The books we use are really dumb. (Apprentice Hairdresser)

They don't push you to excel and anyway, there's no scope for specialisation, as I'll have the same qualifications as a pizza maker.
(Apprentice Chef working in upmarket restaurant, 21 years)

There's not really much to it really. (Nursery Studies Trainee)

Apprentices/trainees also emphasised the importance of helpful, supportive, knowledgeable and up-to-date teachers who focussed on their individual needs and made time to interact with them.

The teachers know what they're talking about. (Apprentice)

TAFE teachers are much better than schoolteachers. (Apprentice)

They know their stuff, but can't always explain it well. (Apprentice)

The theory is really useful and handy to have. (Trainee Nurse, 19 years)

The importance of interaction with teachers was highlighted across the three reviews. The following comment from a third-year plumbing apprentice makes a generalisable point about both apprenticeships and traineeships.

We need more hands on teaching. They say it is self paced and that's OK but you really need a few lessons to lay the groundwork. I think it's just a cheap way of teaching. (VTSAN Submission 2000)

Linking on-the-job and off-the-job training

Solid links between off-the-job training and on-the-job experiences were highly valued, and the apprentices/trainees consulted wanted to see a tighter linking of the two forms of training. They emphasised two aspects of this linkage: more meaningful field visits by teachers and trainers and rigorous workplace assessments.

Apprentices and trainees were keen to have a more meaningful interaction with their workplace trainers and assessors. While acknowledging the need for a flexible approach to workplace visits, in practice this was sometimes simply too flexible and laid back for their liking.

They just ask you how your assignments are going. And if you say you need more time, they say OK, that's fine. (Office Administration Trainee, 19 years)

The Victorian focus groups also suggested that assessment of competencies and skills during traineeships, and to a lesser extent during apprenticeships, are seen to be somewhat subjective and dependent on the individual assessor, rather than on actual apprentice/trainee performance.

It's just like nothing. You just get your boss to tick things off when you do them. The workbooks are simplistic. (Office Administration Trainee)

At the level of expectations and workplace experiences

Judgements by apprentices and trainees about the quality of the training program cannot be disengaged from their expectations or from the management and organisational culture in their workplace.

Expectations

Both apprentices and trainees seemed to share a common expectation about apprenticeship training—that it should be structured and rigorous training of good quality, conducted both on the job and off the job. Perceptions about apprenticeships seemed to provide the quality benchmark for trainee judgements about the quality of traineeship training. It would seem that most trainees expected traineeships to be similar to apprenticeships in almost all respects except the length of the contract of training.

It would also seem that trainees have similar expectations as apprentices about the mix of on-the-job and off-the-job training. In the Victorian study, 86% of apprentice respondents to the survey thought that their training program had the right balance between on- and off-the-job training, but only 66% of trainee respondents thought so.

Experiences of traineeships can, however, be very different from original expectations, and a significant minority of trainees was disappointed with the quality of training they received, particularly where training was fully on the job or where the job design was narrow or confining.

> *It's a joke. It's nothing compared to an apprenticeship.*
>
> (Trainee Meat Processing)

> *I wouldn't recommend anyone to do this. It's been really disappointing. No, it hasn't met my expectations at all.* (Office Administration Trainee, 20 years)

> *I can't believe we're getting a diploma for what we're doing. It's crazy.*
>
> (Office Administration Trainee, 20 years)

Induction

Apprentices and trainees believed that a good quality induction provides a strong foundation for understanding their rights and obligations as an apprentice/trainee and for helping them settle into the workplace.

> *We get a really structured induction process and get told everything we need to know. I often tell other people about this, and they can't believe how good it sounds.* (2nd year Apprentice Electrician, 26 years)

> *We did a three-day introduction to the firm and we go to 4 hours training each week after work as part of our apprenticeship.*
>
> (1st year Apprentice Chef, 21 years)

I was just chucked in. No one sat down with me to explain anything. I was just given something to do. (Apprentice Panel Beater, 25 years)

It was straight to work for me. I got nothing at all.
(Office Administration Trainee, 20 years)

Apprentices/trainees believed that a quality introduction to a firm could make or break an apprenticeship/traineeship. In the focus groups, the overall quality of on-the-job training experienced by apprentices/trainees was generally linked to the attitudes of employers and the initial induction process. Apprentices and trainees who received little or no formal induction into the company were more likely to receive poor quality on-the-job training, while those who had received a more structured induction tended to receive better quality training.

For them, high quality induction occurs when apprentices/trainees are:

- given an introduction to a firm
- provided with a job description
- given information on the employer's expectations of their performance
- able to plan their learning
- assigned a workplace mentor
- encouraged to approach the employer if they have concerns

These matters are not so much matters related to the quality of a training program itself but more ones of good personnel practices that should reasonably apply to all firms. The fact that they do not is a statement not about the quality of the training process but about the context—the human resource management within enterprises.

The workplace environment

Apprentices and trainees generally had a very clear view of the workplace context and experiences that contribute to quality on-the-job training. They consistently highlighted four workplace characteristics.

- Employers provide adequate time for off-the-job instruction.

  They want you to stay at work. They're not interested in TAFE . . . I missed out on 5 weeks of TAFE on account of my boss.
  (Apprentice Cabinetmaker, 17 years)

- The workplace offers a safe working environment.

  We've got to weld in a room with no exhaust fans in thick clouds of smoke. We've been asking for better ventilation since I started, and still nothing's changed. (3rd year Apprentice Boiler Maker, 20 years)

  One of the tradies came in claiming that I'd borrowed his angle grinder. I rolled it over to him, and then [he] laid into me head.
  (3rd year Apprentice Panel Beater, 25 years)

- Employers take time to explain work issues and unfamiliar tasks to their apprentices/trainees.

  I've really learnt a lot. They're so helpful and take time to explain things to me. (Nursing Trainee, 19 years)

  Every week my employer makes a point to sit down with me and show me a couple of new things. (Trainee IT Technician, 19 years)

  The head chef is really good. He'll go through the molecular structure of a zucchini with me on occasions. (Apprentice Chef, 21 years)

- Employers see their apprentices and trainees as an investment rather than a source of labour.

  You're often nothing more than cheap labour to your boss. (Apprentice)

  It's almost as if they don't want you to know. They like to keep you in the dark, so they can pay you less. (Apprentice Boiler Maker, 20 years)

At the level of career and life aspirations

It is self-evident that each individual apprentice and trainee holds a unique mix of goals and aspirations and undertakes an apprenticeship or traineeship for many different reasons.

- To pursue life-long interests.

  I've liked cooking since I was a child. It's something I've always wanted to learn. (Apprentice Chef, 20 years)

- To leave school.

  School just wasn't for me. (Apprentice Cabinet Maker, 17 years)

- To work overseas.

  You can work all around the world with this job. (Apprentice Chef, 20 years)

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- To receive a formal qualification.

  I've been working in a pharmacy for a long time and a traineeship was just a way of formalising the skills I've already learned. (Retail Administration Trainee, 42 years)

- To find a career which matches their personal and professional interests.

  I'll be 19 when I get out of my time, and I'm gonna start another trade. (Apprentice Mechanic)

- To improve future employment opportunities.

  Throughout my life, I've done an apprenticeship as a chef, a traineeship as a home carer and now I'm doing a traineeship in nursing. (Nursing Trainee, 45 years)

- To earn money while deciding what to do next.

  It's great for people who have no qualifications and don't want to get tied down to anything. (Business Administration Trainee, 19 years)

These different and often multiply held aspirations change with the individual's life cycle and obviously impact on the perceptions of apprentices and trainees of the quality of their training experience. However, beyond differences between individuals, there also appears to be some significant differences between the career and life aspirations of apprentices as a group and those of trainees as a group.

The Victorian review included a survey in which respondents were asked to nominate the reasons for their involvement in apprenticeships and traineeships. When asked the main reason for becoming involved in an apprenticeship/traineeship, 59% of the apprentice respondents cited 'to start a career in the industry' as the main reason, whereas this was the driver for only 21% of trainee respondents (NCS Australasia with Fischer & Associates 2000).

This finding is important in at least two respects. Overall, it reflects the diminishing concept of 'career' in a labour market where the proportion of the workforce engaged in standard full-time continuous work as employees has declined from around 80% in the later 1960s to a little under half the workforce today (Buchanan & Watson 2000). In terms of the differences it reveals between apprentices and trainees, it most likely reflects differences not between individuals but between the structure and content of work in the manufacturing sector that employs most apprentices and the structure and content of work in the services sector that employs most trainees.

Perhaps reflecting age differences or status as existing employees, trainees were more likely to cite 'to get a better job or promotion' (22%) or 'the employer decided' (24%) as their reason for getting involved. When asked to list other reasons for becoming involved, 60% of apprentice respondents and 51% of trainee respondents cited 'to gain qualifications'.

Two further differences between the expectations of apprentices and those of trainees were apparent in the Victorian survey. The first was around what they expected to be doing following the completion of their training. In fact, 54% of apprentices thought they would continue working with the same employer, while 70% of trainees thought this would be the outcome. However, this difference in post-program expectations did not seem to cause any significant difference in satisfaction with training methods or with assessment between apprentices and trainees.

Second, 95% of apprentice respondents agreed that their apprenticeship was helping them to achieve the main reason they had for getting involved, but only 81% of trainee respondents agreed. It is reasonable then to conclude that apprenticeships are doing a better job than traineeships in meeting the career and life expectations of those participating, although there is room to improve in both forms of employment-based training.

Employer perspectives

The capacity of a company to provide good quality workplace training is influenced by its capacity at three levels: the level of the training program, the level of the company's human resource management and the level of the company's competitive business strategy. The best quality apprenticeship and traineeship training occurs when the company is a high performer at each of these three levels.

At the level of the training program

The reviews systematically pointed to a set of characteristics that define a company's capacity to contribute to a quality training process and experience. These, with some refinement, could be expressed as quality statements or benchmarks and perhaps be used by New Apprenticeship Centres, apprentice/trainee field officers and providers at the point of signing-up a new apprentice or trainee.

- The company is well informed about the structure and purpose of apprenticeships/traineeships.
- The company acknowledges the mutuality of interests between the employer and the apprentice/trainee when signing a training agreement.
- The workplace offers the range of equipment and facilities needed to support the training program and, if it is unable to provide this directly, makes arrangements to provide the necessary exposure and experience.
- The company is capable of making evidence-based judgements about the quality of the training provided by different training providers.
- The company considers both the apprentice/trainee and the training provider as its partners in planning and implementing the training program and fosters productive relationships and ongoing communication between them. The respective roles and responsibilities of the provider and the company in the training program are clearly defined and understood by all parties, and negotiated when developing the training plan. The company is concerned to negotiate not only where and when training is to occur but also takes an active interest in how it is to be delivered and assessed.
- The company accepts full responsibility for structuring quality on-the-job learning experiences and accepts responsibility for linking on-the-job training with off-the-job training.
- The workplace supervisor/mentor/coach has the skills to provide day-to-day support to each apprentice/trainee, has the skills to undertake fair, valid and reliable assessment of workplace competence, complementing those of the provider and has the time and inclination to do so.

- The company ensures that the apprentice/trainee is given adequate time to reflect on their on-the-job learning and participate in off-the-job training, notwithstanding operational pressures.
- Other employees at the workplace are encouraged to support and coach the apprentice/trainee as needed.
- Where the company is also a registered training provider, special care is taken to ensure that training provided and assessment conducted meets national training standards and is at all times conducted ethically.

At the level of human resource management

Consultations and submissions arising from the quality reviews indicate a close correlation between enterprise capacity at the level of the training program and human resource management within the enterprise, a correlation which is supported by the research (see, for example, Tavistock Institute 1998). Keep, from the Oxford University-based Centre for Skills, Knowledge and Organisational Performance (SKOPE), makes this point succinctly:

> *higher levels of sustained skill formation and utilisation are associated with wider people management systems that aim at high levels of involvement and performance.* (Keep 1999, p.10)

Based on the reviews undertaken, such people management systems do not appear to be dependent on the existence of a designated human resource manager, nor do they seem to be necessarily a function of company size. During the reviews, many micro and small companies were able to articulate a comprehensive approach to human resource management encompassing matters as diverse as staff morale and motivation, staff recruitment, progression and retention, staff appraisals, staff output and industrial relations. However, such systems are more likely to be in place in medium and large companies.

From the consultations and submissions it is possible to build up a picture of an enterprise where apprenticeship/traineeship training is embedded in a wider people management system.

In such 'good practice' companies, training is perceived as an integral part of the overall human resource strategy and corporate people management practices are consistently applied by all managers within the company, from front line managers through to chief executives.

Such companies are likely to have a commitment to retaining people in the region in which they are located and/or in the industry of which they are part. In one submission, an owner/operator of a franchise store commented that:

> *A big perceived need in our community is to provide high quality training and job pathways to young people that will allow them to stay in the area and retain their skills within the community. Currently most of our youth go to the cities and few return to (city). A problem in many regional centres.*

> *We are very proud of the model of training we have set up . . . and the results achieved . . . Our staff morale was high and staff retention dramatically improved. Our Sales Per Person Hour are higher than most (similar franchises). These results, we believe were totally due to our total staff emphasis on training.*
> (Confidential submission 93)

For another employer in regional Victoria, training was the means chosen to allow the enterprise to make the transition from manufacturing to wholesale operations. Using traineeships for retraining allowed it to avoid laying off existing staff, thus both avoiding recruitment problems and keeping faith with its community that was highly sensitive to the potential loss of local jobs.

The high performance workplace conforms to all occupational health and safety standards and is occupational health and safety conscious. Management takes active steps to ensure that it is free from harassment or bullying, and, where these do arise, action is taken swiftly to ensure apprentices/trainees are not disadvantaged or victimised.

Such companies provide their apprentices/trainees with a comprehensive induction to both the job and the workplace and regularly offer them feedback on their job performance as well as their training progress.

Perhaps the most important characteristic of companies with good people management systems was that apprentice and trainee jobs are designed in ways that challenge apprentices and trainees and provide for workplace learning that is both broad and deep. In high performance workplaces, work processes need to be organised in ways that allow apprentices and trainees to learn from the most experienced employees and are able to place their own work in the context of the overall company standards and aspirations.

At the level of competitive business strategy

There is a strong tendency for the VET system generally, and training providers specifically, to focus on the characteristics of the training program itself, without due regard to the broader business context in which employers are making their training decisions. Providers and governments seem slow to recognise that training for many, perhaps most, firms is a third-order issue. Writing on the UK VET system, Keep and Mayhew make the following observation that seems to apply equally in the Australian context of apprenticeships and traineeships, and more widely.

> *Unless and until first-order questions, such as choice of product market and competitive strategy, and consequent second-order decisions about work organisation and job design, are confronted, the underlying causes of Britain's skills problems will continue to be ignored. The danger of policies and institutional devices . . . which concentrate on boosting the supply of qualifications and formalised skills and knowledge is that they appear to offer a relatively swift and simple short cut to a wide-ranging set of desired outcomes . . .*

without having to confront complex and difficult choices about how businesses choose to compete. (Keep & Mayhew 1999, p.12)

How businesses choose to compete is the contextual issue. They can choose to compete by asset stripping or take-overs. More commonly, they can choose capital investment in labour-replacing technologies or they can choose to re-design supply-chains, develop new production processes (such as lean manufacturing) or new distribution systems which may or may not require training.

Most providers consulted during the reviews seemed to have a very limited interest in, or appreciation of, the range of competitive choices confronting businesses, both large and small, and displayed limited capacity to judge when apprenticeship or traineeship training is or is not an appropriate response to competitive business pressures. This is in part because many providers only have one product to offer—the training program—and self-interest leads them to promote this as the panacea for all business problems. It is also in part because most enterprises make organisational changes in ways which are 'incremental, *ad hoc* and often not the result of a coherent, long-term plan for skills' development' (Penn 1999, p.14). These are often hard for training providers involved in apprenticeships and traineeships to see and understand.

However, a significant minority of employers consulted did have a reasonably clear picture of how training fitted with their overall workplace and business context. One large employer submitted the following comments to the Victorian review, illustrating a sophisticated view of the relationship between training and business strategy.

> *A number of factors have led to this growing commitment to the training/development of both new and existing employees within (our firm).*
>
> *Some of these factors have been:*
>
> - *Increasingly competitive nature of Retailing Industry. This has highlighted the need for better trained and equipped staff—at all levels of operation.*
> - *Higher customer expectations.*
> - *Increased use of new technologies.*
> - *Greater expectations of employees for the company to provide stimulating, rewarding, clearly defined and accessible/assisted career paths.*
>
> *Added to this, the cornerstone of (our firm's) strategy for meeting changing industry needs is to attract employees who are seeking a long term career within the organization . . . (Our firm has) chosen a policy of permanency in employment with the majority of jobs of permanent status.*
>
> *The provision of training and development for all employees is inherent in (our) business strategy.* (Confidential Submission 72)

Smaller firms, too, were able to signal a business strategy and how training fitted within it. One employer who attended the Victorian consultations simply said: 'We would have to train anyway or we'll stagnate'.

If workforce skill is the chosen strategy to improve competitiveness, enterprises can choose to recruit already-skilled labour (poaching) or to grow their own skills base. They can pursue skill formation strategies for their internal labour market by reproducing the existing skills base (as appears to be the case for most traditional apprenticeships), by expanding skills or changing the skills of their workforce (as seems to be the case with many traineeships) (Penn 1999, p.10).

A good part of the national VET system rests on an assumption that the competitiveness of Australian industry will be achieved through a high-skills/high-performance equilibrium. It is assumed that the imperatives of globalisation, technological change and more sophisticated markets for goods and services inevitably drive the need for higher level skills. At the level of the individual enterprise, the actual situation is far more complex and differentiated. Some companies are using the apprenticeship and traineeship system for up-skilling, some are using the traineeship system for down-skilling from apprenticeships and others are operating with a mixed strategy of both up-skilling and down-skilling to produce a high-skill/low-skill workforce.

> *Producing high-tech, high quality goods and services that require high levels of skills is not, of itself, intrinsically important to a company. The issue of overriding concern is whether or not its product market strategy allows it to survive and to make adequate levels of profit. If companies can achieve these ends through the production of low-cost, low-quality, high volume goods and services that require minimal skill levels, then there is little reason for them to alter their strategies.* (Tavistock Institute 1998, p.15)

From the perspective of the enterprise, the decision to sign-up an apprentice/trainee and the depth and breadth of skills developed depends on whether the enterprise has chosen to compete on a high-skill/high-wage/high-price strategy, a low-skill/low-wage/low-price basis or some combination of the two within the same firm but across jobs. Apprenticeships and traineeships are being used for all three strategies. Anxiety about the declining quality of apprenticeships and, to a greater extent, the low level of some traineeships are, in part, a response to the decision of some firms to compete on the basis of low-skill/low-wage strategies.

The competitive business strategy, along with the human resource management system, thus shapes in quite fundamental ways the decisions that employers make about training, the conditions under which that training is undertaken, the scope and depth of that training and thus its perceived quality.

Perceptions of training providers

Because provider perceptions of apprenticeship and traineeship training are already dominant in much VET debate, this study deals with them only briefly. There are, however, two general points to be made.

First, perceptions within the provider community about what constitutes quality apprenticeship and traineeship training are almost as varied as those held by employers and by apprentices/trainees. In particular, perceptions held by Technical and Further Education (TAFE) institutes seem to differ in a number of significant ways from those of private and community providers, most obviously on the question of whether quality training can be achieved in a fully on-the-job mode. However, while there are significant differences between providers' orientations, capabilities and actual training practices, there are also many commonalities.

Second, all providers are under considerable pressure as more enterprises become registered training organisations, converting external training provision to in-house provision; as structured on-the-job training acquires greater workplace credibility than off-the-job training in some employer circles and as employers (and to a lesser extent apprentices and trainees) exercise user choice prerogatives to choose time, place and mode of delivery. How providers respond to these pressures will depend on the strategy with which they choose to compete.

At the level of the training program

Many providers are currently struggling to establish new ways of planning, organising and facilitating apprenticeship and traineeship training based on training packages rather than curriculum. The trend away from off-site/off-the-job institutional training and towards workplaces as the site for both on-the-job and off-the-job training increases the challenge. Notwithstanding this new, volatile and less ordered environment, the reviews indicated a good deal of provider consensus on what constitutes quality apprenticeship and traineeship training.

They consistently referred to the training difficulties encountered when there is a mismatch between the learning needs of the individual apprentice/trainee or their job, on the one hand, and the qualification pathway selected by the employer, on the other. Consequently, they felt strongly that a comprehensive training plan should be a matter for genuine negotiation between the employer, the apprentice/trainee and the provider, allowing for the training program to be aligned with workplace needs, for the recognition of prior learning and for the early identification of any literacy and numeracy needs of the learner.

Most providers also felt that while the training program should be firmly located in the practical context of the workplace, it should also extend the scope of vocational learning beyond the specific job and beyond the specific

workplace. Providers recognised the need to customise training and assessment to individual workplace contexts, but they did not want to sacrifice the breadth and depth of learning achieved for flexibility and workplace relevance.

Not all providers indicated a deep appreciation of the importance of the on-the-job experiences to the overall quality of the training program, although they did believe that provider-facilitated training must be complemented and extended by skilled workplace supervisors who are able to facilitate, coach, mentor, train and assess.

With few exceptions, providers across all three States reviewed believed that designated time off-task for reflection on, and extension of, the apprentice/trainee's on-the-job learning goes to the heart of quality vocational learning. Whether this is provided within the workplace or beyond it was not the central quality issue for most providers, it was the provision of dedicated training time away from the workstation.

Finally, providers believed that quality training programs required qualified staff with up-to-date technical and professional skills which enable them to not only assess but to conduct training and facilitate learning and development. The provision of good quality learning materials and resources which are relevant and challenging and which address both national competency standards and business objectives was also regarded as important, although certainly provided in many instances.

Two matters stand out as particular points of divergence along the spectrum of provider perceptions about what factors lead to a quality training program.

The first relates to the degree of group interaction necessary to ensure sound vocational learning outcomes. Increasingly, and largely for logistics reasons, providers are facilitating traineeship training on a one-to-one basis, although this was not a common practice with apprentice training. Increasingly, providers reported that they were 'delivering flexibly' through programs of workplace visits (of variable frequency and length) to support self-managed learning by individual trainees, especially where a company employs only one apprentice/trainee.

Other providers believed heavy reliance on one-to-one training diminishes the quality of vocational learning in so far as it fails to offer opportunities for the development of interactive skills that are increasingly valued in workplaces. One submission in particular captured this alternative perspective.

> *It is our view that learning is fundamentally a social process and the designated time for learning is most useful if it enables worker-learners to get together in groups to share ideas, experiences and insights. Through dialogue and exchange learners develop the capacities for critical questioning and learning to learn (including the crucial 'transferability' of knowledge).*
>
> (Workplace Learning Initiatives 2000, p.5)

Employers of apprentices, more so than trainees, saw value in group-learning processes.

> *I see positive benefit in my employees being exposed to other apprentices in a more traditional institutional environment in which there can be an exchange of ideas between my employees and those of other companies.*
>
> (Confidential Submission 50)

These perceptions are supported by the research.

> *The individualistic orientation is so strongly grounded in the training model as well as in learning theory, that researchers, policy makers and human resource developers alike have been slow to realise that the new organisation forms call for new social models of learning which stress the collective rather than the individual perspective.* (Tavistock Institute 1998, p.10)

We may conclude that most, but certainly not all, providers (and many employers of apprentices) perceive time and opportunity for group interaction as a pre-condition for a quality training program.

The second point of provider divergence relates to the complex concepts of underpinning knowledge, transferability of knowledge and skill and key competencies. Some providers had a strongly functional approach to competence, interpreting it narrowly to mean task-specific and job-specific competence. Consequently, their training programs were structured to achieve this. The majority of providers, however, held a wider view about occupational and industry competence and a more holistic concept of competence.

> *Work-based learning must provide support and coverage of the underpinning skills and generic key competencies integral within the apprenticeship and traineeship program . . . It is these skills which provide the basis of transferability of skills to new areas of learning.* (Confidential Submission 38)

For providers, who genuinely believed that apprenticeships and traineeships should be part of a high-skills agenda, the development of underpinning knowledge and key competencies through the training program was seen as a touchstone characteristic of quality.

At the level of provider orientation to workplace learning

Perceptions of workplace learning and training vary considerably between providers and seem to depend on their organisational history, organisational culture and their understanding of just what workplace training means in the context of the apprenticeship and traineeship system.

At one extreme were those (mainly private) providers who gave the workplace almost canonical status, drawing on the rhetoric but not the practices of continuous learning work and the learning organisation. At the other extreme are those (mainly public) providers who downplayed or even dismissed the value of workplace training and assigned primacy to off-the-job institutional

training, almost as if it was a remedy for inadequate workplaces. In between these extremes were the majority of providers who were striving to develop new ways to connect training with the workplace in order to maximise the effectiveness of apprenticeships and traineeships.

Much discussion about the role and value of workplace training is occurring in a rapidly changing labour market. Based on the consultations and submissions, the following observation is relevant in the Australian context.

> *Overall there is indeed an increasing emphasis on more planned and structured learning in the workplace in place of off-the-job training and incidental 'sitting by Nellie' modes of learning. But clearly there is a long way to go in realising the full potential of the workplace as a learning environment.*
>
> (Tavistock Institute 1998, p.12)

If all or even the majority of enterprises employing apprentices and trainees were, or aspired to be, learning organisations and were pursuing a high-skills/high-performance business strategy, then the opportunities they could provide for excellent vocational learning would be almost unlimited. The reality is quite different, evidenced by the many examples given to the reviews of poor or very ordinary workplace environments that provided few challenges or opportunities for vocational learning of substance.

On the whole, providers were ambivalent about the role of workplaces and the quality of workplace training, reflecting a much wider ambivalence noted by Hawke:

> *workplaces are not clear about what role they want to play . . . and are equally unclear about what they can properly expect to obtain from any involvement . . . Finally, policy-makers are unclear about what they want workplaces to do.*
>
> (Hawke 1998, pp.6–7)

At the level of provider capability

Just as enterprises choose how they will compete, so, too, providers choose how they will conduct their business in the context of the re-making of the apprenticeship and traineeship system specifically, and the marketisation and devolution of the VET system more broadly. Strategic choices about workforce casualisation, employment conditions, working time and the intensification of teaching work; about staff qualifications, skills, training and re-training; and about flexible delivery systems, teaching and learning resources and assessment systems are being made either strategically or by default by training providers facing increasing market pressures. These choices in turn affect the quality of the training program designed and delivered by the training provider. A provider strategy that competes on price alone and which revolves around delivering low-cost, self-paced training supported by a large cohort of inadequately trained, inexperienced, mobile and casual trainers is unlikely to lead to the development of high-level skills within enterprises.

Seddon (1998) has suggested that there are at least three provider responses to the complex and changing VET environment: to resist, to become advocates for reform or to take up a capacity-building agenda. Here, capacity building may be taken to mean the development of practices that accommodate both innovation and valued tradition (Seddon 1998, p.4).

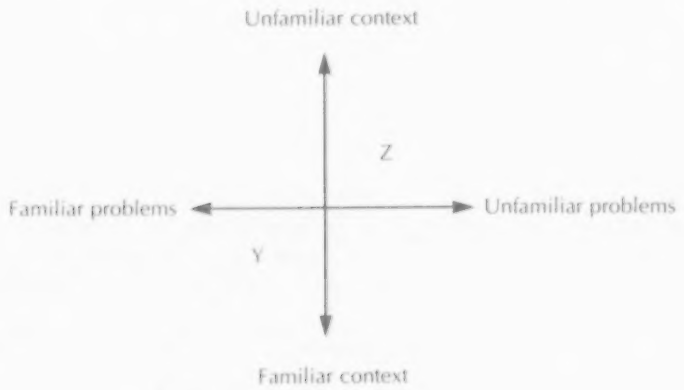
Training providers in Queensland, Tasmania and Victoria may be loosely aligned with these three responses. There are many providers who have become strong and sometimes unquestioning advocates for the package of reforms to the apprenticeship and traineeship system, while others are still firmly resisting them—although overt resistance is diminishing. A third, smaller group is clearly on the capacity-building path, trying to remake themselves in response to the multiple pressures arising from the introduction of New Apprenticeships.

Looking from a different angle, Stephenson has offered the idea of a capable organisation.

> *The capable organisation, like the capable individual, has an all round quality, an integration of technical expertise, belief in its capacity to perform in changing circumstances, confidence in its ability to learn, and the capacity to make appropriate judgements within an explicit and relevant set of values.*
>
> (Stephenson 1999, p.3)

His concept, depicted in figure 2, suggests that capable organisations are those that can operate in changing contexts and work with changing problems.

Figure 2: Capable organisation in a knowledge and learning culture



Note: Position Y maximises knowledge in company, converts it to new applications, skills
Position Z engages environment, confident in own values and identity, collaborates, learns and adapts, networks, manages its own growth
Source: Stephenson 1999

Like the concept of capacity building, this concept of the capable organisation is helpful in considering the contribution that providers make to quality vocational learning of apprentices and trainees. For three decades at least, providers have been largely operating from position Y. But New Apprenticeships and user choice have presented them with unfamiliar problems in organising and facilitating apprentice and trainee training and are now called upon to plan and deliver training programs in increasingly unfamiliar contexts. They are being transported to or are migrating to position Z, but most still have a long way to go before they could be considered capable in Stephenson's terms, at least in relation to New Apprenticeships.

The extent to which providers can devise appropriate solutions will depend on their capability to engage with the new environment of workplaces and work organisation, to work with the increasingly diverse expectations of apprentices/trainees, to adapt to changing times, to collaborate as well as compete and to accept responsibility for, and manage, their own growth. Only those providers who can remake themselves in this way will be able to provide training programs that meet the needs of enterprises and of apprentices and trainees in ways that enhance rather than diminish training quality.

Conclusion

The three reviews identified many systemic, professional and managerial improvements needed to enhance vocational learning for apprentices and trainees. They proposed many practical measures such as more and better professional development for trainers and assessors, removing the option of fully on-the-job training, the negotiation of comprehensive training plans and enhancing, monitoring and moderating assessment practices.

However, in the final analysis, good vocational learning swings not so much on technical matters as on two less tangible elements—relationships and culture—which are not so amenable to public policy interventions.

Sound vocational learning depends fundamentally on the quality and nature of the relationships forged between employers and apprentices/trainees, in the first instance and, subsequently, between them individually and together with the training provider. Only when the three parties to the apprenticeship/traineeship are working from a basis of common understanding, shared expectations and clearly defined roles and responsibilities for training can the potential of vocational learning be fully realised.

Organisational culture is even more difficult to touch and feel than relationships, but it is an intangible that finds practical expression in many forms in the workplace and within the training organisation. Organisational cultures which are comfortable with, and indeed relish, change and challenge, which value innovation and diversity and which are committed to building vocational training systems and practices on the common ground rather than on

individual interests are more likely to provide apprentices and trainees with vocational learning opportunities which are valuable in themselves and truly valued by all.

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